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THE

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VOLUME XXI

1919

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THE TECHNOLOGY REVIEW

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THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Cambridge, Mass.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY aims to give thorough instruction in Civil, *Mechanical, Chemical, Mining, Electrical* and *Sanitary Engineering;* in *Chemistry, Electrochemistry, Architecture, Physics, Biology* and *Public Health, Geology,* and *Naval Architecture.*

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Orville B. Denison, '11, (term expires May, 1920).
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Henry J. Horn, '88.	George B. Glidden, '93.	Joseph H. Knight, '96.
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M. L. Emerson, '04.
F. H. Fay, '93.
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F. W. Lovejoy, '94.
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'75, Thomas Hibbard.
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'77, B. T. Williston.
'78
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'83, Horace B. Gale.
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'93, George B. Glidden.
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Technology Club of Central Penn.
Technology Club of Chile.
Technology Club of China.
Technology Club of Fall River.
Indiana Association M. I. T.
Technology Club of Lake Superior.
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Technology Club of Niagara Falls
Tech Club of Portland, Me.
Technology Club of Panama.
Technology Club of Paris.
Technology Club of Rochester.
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Organized in New York, January 17, 1913.

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Dover, N. H.
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1712 Eye St. N. W., Washington, D. C.
Arthur Graham Robbins . . '86
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Edward Galbraith Thomas . . '87
213 Floyd Street, Toledo, Ohio.
William Gage Snow . . . . '88
95 Milk Street, Boston, Mass.
Walter H. Kilham . . . . '89
9 Park Street, Boston, Mass.
George L. Gilmore . . . . '90
Lexington, Mass.
Henry A. Fiske, ... '91
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John Arthur Collins, Jr. . . '97
67 Thorndyke Street, Lawrence, Mass.
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Mass. Inst. of Tech., Cambridge, Mass.
W. Malcolm Corse . . . . '99
The Ohio Brass Co., Mansfield, Ohio.
Benj. S. Hinckley, Ass't Sec.. . '99
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Ingersoll Bowditch . . . . . '00
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David M. MacFarland . . . '18
626 South High Street, West Chester, Pa.

——— . . . . '19

LOCAL ALUMNI ASSOCIATIONS

Akron—The M. I. T. Club of Akron, Ohio, W. H. Fleming, Secretary, 350 Wildwood Avenue, Akron, Ohio.
☞ Luncheon—First Saturday of the month at the University Club, Akron, Ohio.

Albany—Technology Club of Eastern New York, Norman A. Lougee, (11), Secretary, General Electric Co., Consulting Engineer's Laboratory, Schenectady, N. Y.

Atlanta—Atlanta Association M. I. T., W. J. Sayward ('01), Secretary, 609 Chamber of Commerce, Atlanta, Ga.
☞ Luncheon—Fridays at 1 o'clock at Chamber of Commerce Café.

Birmingham—Southeastern Technology Association, F. C. Weiss ('13), Secretary, Alabama Power Co., Birmingham, Ala.
☞ Luncheon—First Wednesday of each month at 1 o'clock at the Hillman.

Boston—Technology Club of Boston, Dr. Robert Seaton Williams ('02), Secretary, Mass. Inst. of Tech., Cambridge, Mass.

Bridgeport—Technology Club of Bridgeport, Howard L. Stone ('14), Secretary, 400 Ogden Street, Bridgeport, Conn.

Buffalo—Technology Club of Buffalo, E. Earle Root ('11), Secretary, Buffalo Standard Ink Corp., Buffalo, N. Y.
☞ Luncheon—First Thursday of month, 12:30 p.m. at Buffalo Chamber of Commerce.

Butte—Technology Association of Montana, C. D. Demond ('93), Secretary-Treasurer, 704 Main Street, Anaconda, Mont.

Charleston, W. Va.—Technology Club of West Virginia, James B. Pierce, Jr. ('11), Secretary-Treasurer, P. O. Box 932, Charleston W. Va.
☞ Luncheon—Third Saturday in each month at Hotel Kanawha, Charleston, W. Va.

Chicago—Technology Club of Chicago, Harvey S. Pardee ('09), Secretary-Treasurer, 619 West Jackson Street, Chicago, Ill.
☞ Luncheon—Tuesdays at 12.30 p.m. at Engineers Club, 314 Federal Street, Chicago, Ill.

Chile—Technology Club of Chile, A R. Hammond ('12), Secretary, Braden Copper Co., Rancagua, Chile.

China—Technology Club of China, William A. Adams ('08), Secretary-Treasurer, 39 Nanking Road, Shanghai, China.
☞ Luncheon— First Saturday of the month, at 12.30, at the Carlton.

Cincinnati—The Cincinnati M. I. T. Club, Moritz Sax ('96), Secretary, 1011 Fourth National Bank Bldg., Cincinnati, Ohio
☞ Luncheon—Tuesdays from 12.00 to 2.00 p.m. at the Schuler Café, 626 Vine Street (2d floor).

Cleveland—Technology Club of Northern Ohio, C. B. Rowley ('12), Secretary, care of H. W. Johns-Manville Co., Superior Avenue, N. W., Cleveland, Ohio.

Connecticut Valley Technology Association, Ernest W. Pelton ('03), Secretary, 77 Forest Street, New Britain, Conn.

Dayton—Dayton Technology Association, W. H. Kiefaber ('08), Secretary-Treasurer, 601 East Monument Ave., Dayton, Ohio.
☞ Luncheon—Tuesdays at 12.15 at the Dayton Engineers Club.

Denver—Rocky Mountain Technology Club, Glenn D. Jones ('13), Secretary, 1910 E. 22d Avenue, Denver, Col.
☞ Luncheon—Wednesdays from 12.30 to 1.30 p.m. at Colorado Electric Club, Chamber of Commerce Bldg., Denver, Col.

Detroit—Detroit Technology Association, F. H. Davis ('04), Secretary-Treasurer, 754 Penobscot Building, Detroit, Mich.
☞ Luncheon—First Wednesday of each month at 12.30 at the Detroit Board of Commerce.

Duluth—Technology Club of Lake Superior, Duluth, Minn.

Fall River—Technology Club of Fall River, Arthur E. Hirst ('13), Secretary, 55 Madison Street, Fall River, Mass.

Harrisburg—Technology Club of Central Pennsylvania, Farley Gannett ('02), Secretary, Telegraph Bldg., Harrisburg, Pa.

Hartford—Technology Club of Hartford, G. W. Baker ('92), Secretary, Box 983, Hartford, Conn.

Hawaii—Technology Club of Hawaii, Norman Watkins ('98), Secretary, Box 385, Honolulu, T. H.

Indianapolis—Indiana Association M. I. T., Frank B. Shields ('07), Secretary, Fletcher Trust Bldg., Indianapolis, Ind.
☞ Dinner—Second Monday of each month at 6.30 p.m. at the University Club.

Japan—Technology Association of Japan, Takuma Dan ('78), Secretary-Treasurer, 344 Awoyama Harajiku, Tokio, Japan.

Kansas City, Mo.—Southwestern Association M. I. T., Hermann Henrici ('06), Secretary-Treasurer, 222 Commerce Street, Kansas City, Mo.

Lawrence { Technology Club of the Merrimack Valley, John Arthur
Lowell { Collins, Jr. ('97), Secretary, 67 Thorndyke Street, Lawrence, Mass.

Los Angeles—Technology Club of Southern California, Paul E. Jeffers ('12), Secretary, care Mayberry & Parker, Pacific Electric Bldg., Los Angeles, Cal.
☞ Luncheon—First Wednesday of each month at the University Club.

Louisville—Technology Club of Louisville, L. S. Streng ('98), Secretary, Louisville Gas & Electric Co., 311 West Chestnut Street, Louisville, Ky.

Manchester—Technology Club of New Hampshire, Walter D. Davol ('06), Secretary-Treasurer, 819 Elm Street, Manchester, N. H.

Milwaukee—Technology Club of Milwaukee, J. F. Blackie ('04), Secretary, care Milwaukee Coke & Gas Co., Milwaukee, Wis.
☞ Luncheon—Every Thursday noon at the University Club.

Minneapolis—Technology Association of Minnesota, Harold E. Young ('06), Secretary, 15 South 5th Street, Minneapolis, Minn.

Montreal—Technology Club of Lower Canada, E. B. Evans ('06), Secretary, 857 St. Catherine Street, W., Montreal, Canada.

New Bedford—Technology Club of New Bedford, Richard D. Chase ('92), Secretary-Treasurer, 607 Purchase Street, New Bedford, Mass. Secretary *pro tem*, Charles F. Wing, Jr. ('98), 36 Purchase Street, New Bedford, Mass.

New Haven—New Haven County Technology Club, Roy L. Parsell ('14), care Winchester Repeating Arms Co., New Haven, Conn.

New Orleans—Technology Club of the South, J. H. O'Neil ('10), 936 Arabella Avenue, New Orleans, La.

New York—Technology Club of New York, Frank P. Montgomery ('02), Secretary, 17 Gramercy Park, New York, N. Y.

Niagara Falls—Niagara Falls Technology Club, Norman Duffett ('11), care Union Carbide Co., Niagara Falls, N. Y.

Panama—Technology Club of Panama, W. F. Grimes, Jr. ('08), Balboa Heights, Canal Zone.

Paris—Technology Club of Paris, Director, Rev. George Crocker Gibbs ('11), 8 Rue de Richelieu, Palace Royal Hotel, near Place du Theatre.

Peking—Technology Club of Peking, Ziang Yien Chow ('15), Bureau of Municipal Administration, Department of Surveying, Peking, China.

Philadelphia—Technology Club of Philadelphia, Headquarters, Engineers Club, 1317 Spruce Street, N. A. White ('06), Secretary-Treasurer, Wenonah, N. J.

Pittsburgh—Pittsburgh Association M. I. T., Francis Foote ('16), Secretary, Jones Bldg., Pittsburgh, Pa.

Pittsfield—Berkshire County Alumni Association of M. I. T., Earl E. Ferry ('12), Secretary, 84 Elizabeth Street, Pittsfield, Mass.

Portland, Maine—Technology Association of Maine, Joseph A. Warren ('91), Secretary, Cumberland Mills, Maine.

Portland, Oregon—Technology Association of Oregon, C. A. Merriam ('06), Secretary-Treasurer, Worcester Bldg., Portland, Oregon.
☞ Luncheon—Every noon at the Hazelwood Lunch, Portland, Ore.

Providence—Technology Club of Rhode Island, Clarence L. Hussey ('08), Secretary-Treasurer, Fruit Hill, 1547 Smith Street, Providence, R. I.

Rochester—Technology Club of Rochester, Virgil M. Palmer ('03), Secretary, Kodak Park Works, Eastman Kodak Co., Rochester, N. Y.

St. Louis—St. Louis Society of the M. I. T., Amasa M. Holcombe ('04), Secretary-Treasurer, Office of Chief of O. D., Washington, D. C.

Salt Lake City—Intermountain Technology Association, Walter H. Trask, Jr. ('06), Secretary-Treasurer, University Club, Salt Lake City, Utah.

San Francisco—Technology Association of Northern California, Headquarters, Room 1107, 833 Market Street, San Francisco, Cal., Capt. Howard F. Clark ('12), Secretary-Treasurer, 3d Corps, A. P. O. 784, A. E. F. John R. Brownell ('01), Secretary *pro tem*, 525 Market Street, San Francisco, Cal.
☞ Luncheon—No regular date, but quickly arranged on occasion.

Seattle—Technology Club of Puget Sound. H. H. Whithed ('11), Secretary-Treasurer, c/o P. S. T. L. & P. Co., Seattle, Wash.
☞ Luncheon—Third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle, Wash.

Spokane—Inland Empire Association of the M. I. T.

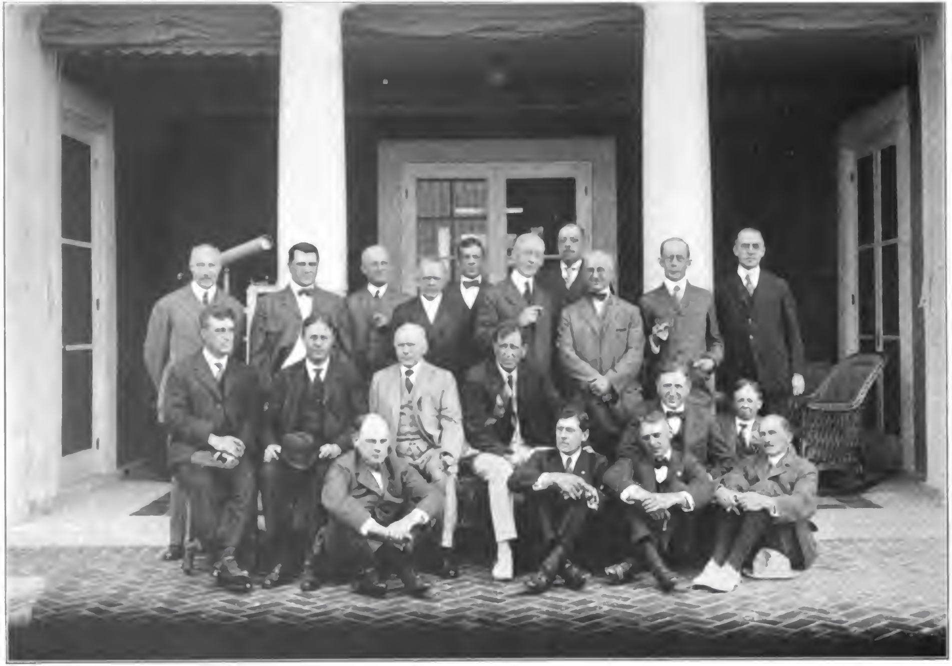
Springfield—Technology Club of Springfield, R. C. Albro ('07), Secretary-Treasurer, 499 Main Street, c/o Fred T. Ley & Co., Inc., Springfield, Mass.

Syracuse—M. I. T. Club of Central New York, J. S. Barnes ('08), Secretary, Merrell & Soule Co., Syracuse, N. Y.

Urbana—Tech Club of the University of Illinois, Arthur C. Willard ('04), Secretary, University of Illinois, Urbania, Illinois.

Washington—Washington Society of the M. I. T., E. J. Casselman ('15), Secretary, 3519 Lowell Street, N. W., Washington, D. C.

Worcester—Technology Association of Worcester County, Louis E. Vaughan ('02), Secretary-Treasurer, 4 Fenimore Road, Worcester, Mass.



S. A. Breed, N. P. Cutler, Carney, Morse, Ashton, D. D. Jackson, King, Hopewell, Biscoe, Barnes
H. L. Clapp, Crosby, W. B. Page, Moody, F. N. Dillon, Edwards
Latham Glidden J. H. Reed Dawes

'93'S TWENTY-FIFTH ANNIVERSARY, JUNE 24, 1918, AT MARBLEHEAD

LUNCHEON GROUP AT HOME OF HENRY A. MORSS

The Technology Review

Published at Cambridge "A" Branch, Boston, Mass.
Robert E. Rogers, *Editor*, Massachusetts Institute of Technology, Cambridge, Mass.

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ANNUAL ALUMNI DINNER SET FOR MARCH FIRST

It is to be hoped that the annual dinner of the Institute's alumni, set this year for Saturday, March 1, will be unusually well attended. It will be not only the first and best opportunity Technology men have had to talk over our work in the war, to find out what the other fellow and the other classes have been doing, but it will give an opportunity for all present to inspect the Walker Memorial as it is going to be in the future, cleared of military activity, the clubhouse of students and their activities and of the Faculty.

It is hoped that as many classes as possible will set their reunions for that date and will get together to inspect the Memorial in the afternoon before the dinner, which will be at seven o'clock in the Great Hall.

The speakers will be notable. Besides President Morss, who will review alumni activities for the year and act as toastmaster, the program will include Governor Coolidge of the Commonwealth of Massachusetts, President Maclaurin and Van Rensselaer Lansingh, '98, who will reminisce about his experiences in Europe. Also, Walter Gordon Merritt of New York, expert attorney on labor litigation, will tell what we have to expect from labor conditions in the future.

The dinner will be inexpensive, to meet peace-time conservation conditions, and it is hoped that we shall have a record celebration.

The Alumni Council.

IN MEMORIAM

In view of the fact that there are at present over eighty names on the Institute's roll of honored dead, the publication of whose memoirs and photographs would overflow the Review for a long time to come, we have tentatively discontinued that feature, which began only last issue, in the hope that arrangements can be made to publish brief notices and pictures of the entire list, in one pamphlet to be published either as a supplement to the Review or as an independent volume, possibly by Commencement next June. That would be the most fitting time, and we feel sure the alumni would be interested in such a volume.

The Editor.

THE NOVEMBER MEETING OF THE COUNCIL

The sixty-sixth meeting of the Alumni Council was held at the Engineers' Club, 2 Commonwealth Avenue, Boston, Monday, November 25, 1918. The usual informal dinner was served at 6.30 P.M., with an attendance of thirty-two, at which Mr. Morris Knowles was salad orator. The guests were President Maclaurin and term members of the corporation.

The business on the call for the meeting was: To receive present and retiring term members of the corporation. To discuss the question: Shall an Alumni Committee to assist men in the service to obtain professional employment be appointed?

President Morss announced the appointment of Mr. Palmquist of the Young Men's Christian Association as curator of the Recreation Room for the S. A. T. C. at Technology. The president also announced that the association had joined with the Alumni Magazines, Associated, to benefit by their joint scheme for advertising.

Announcement was made concerning the Annual Dinner, now set for Saturday, March 1, in the Walker Memorial. Professor Spofford spoke to the Council on the question of employment of graduates, and suggested that a committee be appointed by the Council. After a discussion it was voted that a committee be appointed by the Chair to consider the problem of employment of graduates and if it deems wise, co-operate with the local associations on this problem. The question was raised as to whether or not "The Tech" could be used as a medium of announcing opportunities for graduates and calls by employers for Technology graduates. The alumni representative on the Board of Management of "The Tech" stated that he believed that this could be arranged.

The president announced the appointment of Mr. Charles W. Eaton, '85, as Field Manager, subject to his acceptance. Mr. Eaton is at present abroad on war work.

The question of the M. I. T. Committee for National Service, as to how long this committee should be carried on and what further support could properly be given to the War Service Auxiliary was discussed. It was voted: That it is the sense of the Council that the Executive Committee should inquire into the future needs of the M. I. T. Committee on National Service and of the committee known as the War Service Auxiliary, and report on this at the January meeting of the Council.

Mr. Bemis spoke upon the devotion of Mrs. Cunningham, and suggested that whatever should be done concerning this committee should only emphasize the appreciation of the Council of the unusual work which has been undertaken and so successfully carried through by Mrs. Cunningham. Another speaker suggested that our appreciation of the work done by Mrs. Sedgwick in her particular part of the work should also be noticed.

It was suggested that a review should be made at the annual meeting of what has been done during the past year and a half by an informal report and that later a formal report would probably be presented.

President Morss quoted the vote of May, 1917, which suggested the Council's devoting each year one meeting to the reception of the retiring term members of the Corporation and the newly elected term members of the Corporation. He then introduced to the Council the term members of the Corporation who were present: Messrs. Stevens, '68; Carlson, '92; Rollins, '78; Horn, '88; and Little, '85. These term members spoke of their connection with the Corporation, about their work upon the visiting committees, and of the honor which befalls any alumnus elected to this position. One term member spoke of his endeavor to get in touch and to know personally all teachers of the Department of Architecture upon whose visiting committee he served, together with his effort to get in touch with the students. At this time, the registration in architecture is at its minimum on account of the war, and a plan had been formed by which a joint committee was made up of the staff of the Harvard School of Architecture with our own staff, and he had been asked to serve as chairman. This committee was reviewing the opportunities of making such changes as would help the school. These changes can be made at this time more easily than at other times on account of the small number of students. Another spoke of the re-establishment of the School for Chemical Engineering Practice, which had to be abandoned temporarily because of the war and the calling away of the various instructors to places where sections of the school have been conducted. He mentioned the numerous engineering problems which lie before the country; problems which must be solved by the engineer, many of them by the chemical engineers.

It was suggested by another term member that it is better not to re-elect term members because there seems to be the tendency to confine the alumni activities to a relatively small group of alumni. He emphasized the need of having new men interested. He believed, however, that the term members were a valuable asset to the president and the Executive Committee, for it formed a group of men upon whom they could put special problems.

Mr. Rollins spoke further upon the work of the War Service Auxiliary and upon the need of carrying on the Technology Bureau in Paris for some time to come. A question was raised as to whether or not the material on hand which has been made by the Women's War Service Auxiliary could be used for people other than Technology alumni, and it was voted that the Council endorses the recommendation of the M. I. T. Committee on National Service that the War Service Auxiliary be empowered to distribute this material, not needed by Technology men in service, for the benefit of refugee work. It amounts to material valued at about $2000 to $3000.

THE MEMORIAL AT LAST!

Gymnasium and whole of Memorial to be ready February 1

THE Walker Memorial, for the first time since it was built, will be at the disposal of the students of the Institute not later than the first of February. The Naval Aviators will be withdrawn by the 18th of this month, and the painters expect to be through shortly. The need of a recreation hall has been sadly felt during the past two years and it is hoped by the students that the opening of the Memorial will alleviate this want. The Walker Memorial will now be put to the use for which it was intended, namely that of a student activities and recreation building. The well equipped Walker gymnasium will also be ready for the various indoor teams and will aid them greatly in getting their training, so necessary for a victorious season. The heads of the activities which are going to be in the Walker are going to get together on the fourth and with the aid and advice of Bursar Ford pick out their quarters.

The plan is now that the Alumni Dinner on March 1 will be really a dedication of the building to the uses of the students, as has always been intended.

CLASS BOOKS OF THE WAR

EVERY Technology alumnus who has been interested in the activities of Technology men, whether his classmates or not, in the war, has felt no doubt the inadequacy of the material that has been published either in "The Tech" or in the REVIEW. Both of these papers have tried to publish everything that they could lay hands on, but the information to date is scattering, fragmentary and incomplete.

The editor of the REVIEW would like to suggest, therefore, unofficially that it would be a very good thing if the various classes of the alumni would publish a class book containing the complete record of their members in all branches of war service, if possible, made vivid and personal by letters written by the men themselves, letters which the growing demand on space in every part of the REVIEW makes it impossible often to publish in full.

If this were done, we should within a year have a large and valuable amount of material to go into the permanent records of Technology, and to be the nucleus for that history of Technology in the great war which we all hope to see compiled some time in the future. The editor of the REVIEW would like to have all alumni who are interested in this project write to their class secretaries, to the Association of Class Secretaries, and to the Alumni Council, giving their views on the subject.

A SECRETARY FOR 1919

THE youngest class graduated in such a hurry and in such disarray, that no secretary was ever elected. For that reason THE REVIEW is able to print only such notes as have come to hand in the Tech.

But by the Alumni Dinner of March 1, 1919, the secretary should be elected by postal ballot and should be able to canvass his class for news for the April issue.

In the meantime, however, all 1919 men who have information of interest to their classmates, about themselves or others, may send their notes directly to THE TECHNOLOGY REVIEW.

TO THE YOUNGEST OF THE CLASSES

President Morss's letter to the scattered members of 1919

To the Members of the Class of '19:

It is with great pleasure that I welcome the members of the Class of '19 to membership in the Alumni Association. While, owing to the war, the class was not welcomed at the time of graduation, as has been the custom for many years past, I can assure you that the welcome at this time is no less hearty and cordial than if it had been extended when you graduated.

The Alumni Association is an organization to which it is well worth your while to belong. Its influence in Institute affairs is very considerable. As you doubtless know, it selects each year from its membership three representatives who become members of the Corporation for five-year terms, thus making a total of fifteen alumni members on the Corporation. The Alumni Council, which more directly has charge of the work of the Alumni Association, is composed of representatives of all graduate classes and of local associations, a few members at large and the five most recent past presidents of the Association. Its work extends to all phases of Institute work in which it can properly take a part; for example, the raising of funds for special purposes, the oversight of and help to student activities and to the help and advice even concerning the curriculum.

Each graduate of your class becomes a member of the Alumni Association by virtue of his degree. Other members of the class may be elected to membership. If any non-graduate will fill out and return the application blank for membership I shall be very glad to present his name to the executive committee for election.

While the influence of the Association in direct Institute affairs is great, its service to individual members is perhaps even more important in keeping former students in touch with each other and with the Institute. The headquarters of the Alumni Association are in Cambridge, but in many places in this country, as well as in foreign countries, there are local associations which it is the privilege and should be the duty of those in each place to join. The names of all those who keep headquarters posted as to their address are sent to the secretaries of the local associations, and this makes it easy for any man to join the local association where he may be and know his Technology neighbor.

The dues of the Association are very small and I hope each of you will pay them, for they include subscription to the Technology Review, which is perhaps the best means of keeping those at a distance in touch with other men and affairs of the Institute.

At the banquet of the Alumni Association which will be held in the Walker Memorial on Saturday, March 1, 1919, and which I trust as many as are able will attend, I shall take the opportunity to extend to all members of the Class of '19 a formal welcome to the Alumni Association and to present to the class its Alumni Class Banner.

Henry A. Morss,
President.

Cambridge, January 1, 1919.

DR. MACLAURIN AND THE S. A. T. C.

The National Director explains work of the Student Army Training Corps

THE first authoritative statement on the much discussed organization and demobilization of the Student Army Training Corps in over five hundred American colleges was made by its national director, President Richard C. Maclaurin of the Institute, at the meeting of the American University Association, yesterday afternoon, December 5, at the Harvard Medical School. In it Dr. Maclaurin stated the difficulties that lay in the way of a successful organization and showed that the admitted failure of the present scheme can have no bearing on any future possible attempts of the same nature.

Dr. Maclaurin said: "I understand that when the program was set up, an hour or so was set aside this afternoon for the discussion of the merits and demerits of the S. A. T. C. Great events have, however, intervened, with the result that today the S. A. T. C. is practically at the end of its career. We are here to bury Cæsar, not to praise or blame him. It is suggested, however, that before performing this pious act we should look a little into his history and see what lessons can be learned from the brief record. In the middle of the summer when I was asked by the Secretary of War to accept the educational directorship of the S. A. T. C. the plan presented differed in many important respects from that which stress of circumstances made it necessary to adopt when the work was actually begun. The radical difference was that the first plan proposed to induct the students into the army, but then to place them on furlough status prescribing only a limited amount of drill and requiring a few hours per week to be devoted to the study of the so-called Allied Subjects. This plan would have interfered comparatively little with academic freedom and would, I expect, have avoided most of the educational difficulties that actually presented themselves later. Circumstances, however, made its adoption impossible, the main factors in the change being two: First, the passage of the man-power bill, and second, and far more important, the publication simultaneously with the passage of that bill, of the plan to have four or five million men in Europe by the first of July. Under the changed conditions the law advisers of the War Department advised the Secretary of War that the plan of putting the students on furlough status was illegal, and to overcome this and various other difficulties that were presented, it was decided to place the men on active status and this had as necessary consequences the furnishing of barracks, subsistence and tuition and the payment of thirty dollars a month to each soldier. Before this change of plan was made, tentative regulations had been drawn up and these regulations having been presented to representatives of the colleges and universities of the land met with almost universal approval. Military instruction and discipline were to be in the hands of a military officer and this officer was to have the same relations to the president of the college as a member of its Faculty. That scheme was devised, of course, to overcome the obvious difficulties of dual control, but the change to active status was held by the military authorities to necessitate a change in the relations between the commanding officer and the president and this change had, as all of us who were associated with educational institutions predicted, many unfortunate consequences. Apart from this, however, the announcement of the policy of the authorities to transport an army of four or five millions to Europe by July I could not but affect, and profoundly affect, the plans of the S. A. T. C. As these student soldiers could not be in any way privileged, they must be drawn into direct service at about the same time as those soldiers of similar age who were not in the colleges. This necessitated the rule about the division of the college students into three groups arranged with reference to their age — those of twenty years of age, those of nineteen, and those of eighteen—and the corresponding regulations regarding the courses to be pursued by these different groups. The difficulties inherent in this situation were recognized by every one who appreciated them to be extremely formidable, but there were, as you know, various special circumstances that greatly increased the inherent difficulties. Much the most serious of these was the epidemic of influenza and pneumonia which swept across the country and struck practically all the colleges most inopportunely either just as they were about to begin their work or within a week or two after they had begun it. This epidemic not only left a trail of discomfort and woe, but led to further delays. The process of induction which should have been completed at the very beginning of the term dragged over for a month or so, the process being greatly prolonged by the failure of the local boards to return the necessary papers quickly. Simultaneously with these troubles came those consequent on the breakdown in the Quartermaster's Department and the consequent failure of supplies of uniforms, bedding and the like. None of these difficulties had anything whatever to do with education, but that side of the work was not free from trouble. Plans had been carefully laid for a system of education that was consistent with the scheme approved by the authorities before the passage of the man-power bill, and the change of plans necessitated radical changes at the very last moment when most of the colleges had either already begun or were just about to begin. Further to complicate the difficulties, authority to spend money on publications was withheld until a time when most of the colleges naturally expected to be well under way. I have gone over these matters because some of them may be new to some of you, but you all know that through various causes the S. A. T. C. was scarcely launched before its need was happily removed by the signing of the armistice.

If you bear all the circumstances in mind I do not see how you can come to any other conclusion than that there is little or nothing to be derived from the experiences of the S. A. T. C. that can throw any light on what should be the permanent policy of the country regarding the relations between military and academic training. The conditions under which it worked were all exceptional and all abnormal. The whole condition of the country was not more abnormal than was that of the minds of the students and to a lesser extent of the Faculties. Amongst the few phenomena possibly worth recording are the following: First, the self-sacrificing spirit of practically all who gave themselves to the task of directing this effort; second, the thoroughly good intentions of practically all the army officers, combined in a few cases, it must be admitted, with almost complete lack of appreciation of the difficulties of the problems as presented to the academic mind; third, the individualistic outlook of many, although not all, of the colleges and their difficulty in spite of good intentions of recognizing the military exigencies of the situation. However, do not let us commit the mistake of glibly making generalizations as to the result of S. A. T. C. experiences. Some college presidents are quoted as saying that the experience has proved that military and academic training can not go together, apparently forgetful of the fact that they have gone together with rather conspicuous success in many of the military and naval academies of the world. I am not suggesting, of course, for a moment that the combination of military and academic training such as is to be found at West Point or Annapolis is either necessary or desirable in the colleges and universities of this country. All that the experience of the S. A. T. C. proved was what any one would have expected,—that such a combination could not produce satisfactory results in a few weeks, that it requires time and patience to overcome the difficulties inherent in it and a great deal more careful planning and arrangement of details within each college than was practicable in the very few weeks during which the S. A. T. C. was actually operating. Reports came in from all quarters that difficulties were being overcome and that particularly in the smaller colleges things were beginning to go well, and I have no doubt that with the general good-will and co-operative spirit that prevailed, most of the difficulties would have shortly disappeared. However, all this seems to me rather beside the mark if we are considering the future, for in the future, of course, except in case of actual war, we must have far greater academic freedom and far less military control,—something much more nearly approaching the system that has prevailed for more than half a century in the Land Grant Colleges, with the possibility, I hope, of a more intensive military training in camps during the summer. The provision of work in summer camps would present some special difficulties to technical students but the problem of these students is special anyway and would call for special treatment. It should never be permitted to happen again that the country be called upon suddenly to provide a large army of technical experts for the needs of war. If we are optimistic enough to believe that war is to be abolished then there is no problem for us to discuss today, but if war is to remain a possibility we must face the fact that it would tend more and more to be a war of applied science and the nation that does not take that lesson to heart by training men to apply science to war-like ends should necessity demand such an application would surely go down in the next great conflict.

TECHNOLOGY A REGULAR ARMY POST

On Monday, January 6, the Department of the Northeast took over the barracks occupied by the Students' Army Training Corps at Technology. The 7th, two companies of the 36th, provost guards, moved into the barracks where they will remain indefinitely, probably until all the men returning from overseas have been discharged. One company of the guards is now stationed in Boston and the other is at Camp Devens. The post will be under the command of Major Hickey, U S. G.

Besides the barracks the "Y" hut passes out of Institute hands. The hut will be taken over by the New England district of the Young Men's Christian Association on Monday and Mr. Ames will probably be here as secretary. The Technology Christian Association for which the Young Men's Christian Association functioned during the fall term, will be removed to Room 3-115. The quarters will be temporary, but the book exchange and other departments of the Technology Christian Association will remain open and in charge of Mr. Palmquist. The "Y" hut will be closed to students after today.

The provost guards will number about three hundred. They will eat in the mess hall and have the benefits of the "Y" hut, which will be refurnished by the Young Men's Christian Association. The furnishings now in the "Y" hut belong to the Institute and will be used by the Technology Christian Association.

EDITORIAL

Why the S. A. T. C. Failed

Last December, just before the end of the term, three former undergraduates dropped into my office, all three lieutenants of military aviation, who would have been overseas, save for the armistice, and who were now awaiting their discharge in order to enter Tech again in January. In their discussion of the army and of Technology all three said the same thing with surprising unanimity.

"We never respected Tech so much as we do now, when we have seen what the graduates of other colleges can do with their minds under pressure. We never realized how good our instruction was, how lucky we were. We're homesick to come back, and so is everybody we have seen."

"Everywhere we have been we have had testimony to the universal admiration for Tech, Tech training, and the part Tech men played in the war.

"But we have no use any more for military training in the colleges. We know what army instruction is like. Mainly incompetent. We often knew more than our instructor about technical matters which he was supposed to be teaching us.

"There should be no place for that kind of thing in Tech. Let us go back to the old Tech as soon as possible."

That is one point of view, that military instruction is not up to the Tech standard. But one must doubt whether that was the real cause why the S. A. T. C., both here and in other colleges, failed, as almost universal testimony seems to agree, some of which we are printing at the end of this editorial.

President Maclaurin, national director, in his address printed in another part of this issue, lays the blame on the short time the organization was at work, on the influenza, on the man-power bill, on the lack of co-operation between academic and military authorities. All of this is undoubtedly true, but the real reason lies deeper and on that Dr. Maclaurin did not touch.

Technology was particularly fortunate in some respects. The men had provided for them one of the best plants in the United States. Regular army officers said that the barracks and the mess hall were luxurious beyond the dream of the average army man. We also had in our student-soldiers an admittedly abnormally high level of intelligence.

We also were fortunate in having as Commandant, Colonel Cole, who was probably one of the few in the country who had genuinely at heart the interests of the college and considered them as precedent to those of the army. Hindered and hampered as he was by the inevitable irregularities of the first month, by red tape and conflicting orders from Washington, by a little group of willful officers, he yet tried with all his power, so far as in his authority lay, to make the academic side of the plan the important one and to put the military training in its logical place. He tried not to have drill, guard-mount and fatigue cut in on recitation and study hours, and in large part he succeeded. Yet the whole place was a hotbed of constantly increasingly dissatisfaction as December drew along.

Part of the fault lay with the Faculty. It cannot be denied, I think, that the study time of the students, sharply defined as it was, was not sufficient to do all the work assigned. Furthermore, study was only too often carried on under conditions which made it impossible for young and inexperienced men to concentrate properly.

In other words study time must not only be adequate, but it cannot be scheduled and disciplined, if the results are to be good. And in exactly that point lay the fundamental reason for the failure of the S. A. T. C.

The value and necessity of leisure in the life of men who are doing hard, intellectual work was absolutely ignored by the army regulations. A man is not always able or inclined to study. To expect him to do it at a set hour, and a limited one at that, is preposterous. To expect him to do it in a few regulated hours, when he is fatigued, body and mind, by hours of classroom attention and of fierce bodily exercise, one treading on another's heels, is monstrous. It is physically impossible.

But the question goes deeper still . . . to the value of the unregulated but constructive leisure hours of the students outside the school. I believe firmly that in the ordinary college of liberal arts, great or small, some forty per cent of the value of the whole course is to be gotten only out of the students' spontaneous organization of their own leisure, call it "activities" if you like. The man who avoids or misses them misses a real part of his college curriculum and one of very real value. And, bear in mind, the colleges turn out men who make their marks on their age, quite as frequently as do the professional schools.

In Technology the actual number of hours of class, laboratory, and study are so many that leisure must take a minor position. But even in Technology the value of the students' spontaneous constructive leisure is not less than fifteen per cent. The student who misses such activity altogether goes out into the world lacking things which will be of real importance to him in his life work, the art of dealing with men and of managing affairs.

There is where the S. A. T. C. failed! There is no doubt that regular military life is unutterably vacant and boring . . . that is the reason why the leisure of the common soldier and sailor is too often profitless or actually harmful. Take military restraint, discipline and a fixed schedule, therefore, and add to it an academic fixed schedule of recitations and study, with absolutely the minimum of leisure, so short that all a man can do is go into town or sit in the Young Men's Christian Association hut lazily listening to some one jazzing on the piano—is there any wonder that our Tech men went stale? It is the only word I can think of and it betokens a very harmful state of affairs.

There is the moral. Leisure, unregulated but encouraged to organize spontaneously, is the life-blood of any school, the heart that feeds the scholastic brain. A school under genuine military control has no room for any leisure at all. Therefore, the military system and the intellectual life are absolutely incompatible, and where combined can produce only inefficiency, lack of morale and deadened intellectual interest . . . thus defeating the purpose of education.

And I will add that any attempt by college authorities alone to run a school on the basis of a schedule that leaves no leisure or encouragement for spontaneous organized leisure among the students will drive them, just as the private soldier and sailor are driven, to the useless and harmful amusements . . . the dance hall and the cafe . . . in search of what they would prefer to find, in a self-respecting, worth-while, sublimated form, in their own school home.

R. E. R.

I add a paragraph or two of quotations, the first from the Chicago "Herald-Examiner."

The Student Army Training Corps has proved an interesting experiment. It was a paper scheme, cut to an ingenious pattern. It has not fitted the situation exactly, but how could it?

It was planned to give young men simultaneous training in military affairs and in academic subjects. It has worked out more on the line of a loosely run cantonment with educational decorations. Especially for technical students—medical students, engineering students, chemical students—it has so far been pretty nearly a failure. The men who do most of their educational work in laboratories have found that they have too little time for study. A good many men of this sort are already planning to take this year's work all over again when they are discharged from service.

Even the " ordinary " students who are trying to learn mathematics and French and English have had their troubles. At the University of Illinois the month of October was found to have been so largely wasted that on November 1 they decided on a fresh start; they began all their classes over again. Scores of men reported that they had been unable to attend a single class in the first thirty days.

The National Association of State Universities, which has just met in Chicago, recommends a readjustment of college curricula by January 1. It wishes the S. A. T. C. continued, but wants its work better defined. The net result will be to give many thousands of boys an interest in higher education. And that at least is pure gain.

And the " Transcript " said:

There is fairly free discussion of the whole matter in a general way in the corridors and some facts are evident. One of these is that the M. I. T. curriculum has not been lowered by the changes and the study hours may after all be gauged by the needs of the strongest men, so that military outlining of certain definite hours for studies outside of which there is absolutely no time to be given to them leaves in the lurch excellent young men who under normal conditions might add a period or two of work after hours in the evening. The presence in the college of a group of young men who in view of the probabilities of the cessation of hostilities preferred to remain civilians and answer when drafted complicates the matter. These young men at Technology are not to be considered slackers, for the whole tenor of advice there has been to finish technical studies first and then get as quickly as possible into war service or industrial, and they have followed the advice. Although they are given a liberal allowance of military drill and must take the war issues studies, they are still free to attend all the lectures, without interruptions for guard duty, and can study as late at night as they please and at their convenience. They sit, however, in the same classes with the S. A. T. C. in many instances, and have definite advantages in the fuller time they can give to studying.

CHEMISTRY AT THE FRONT

By Henry P. Talbot, '85

The Review considers it highly worth while to reprint from the Atlantic Monthly of August, 1918, Professor Talbot's article on a subject whose secrets were so jealously guarded and on which he, as an important member of the Chemical Service of the army, is more than qualified to speak.

I

Soon after the opening of hostilities, this world-war was referred to by certain writers as "a chemists' war." While this phrase, like many of its kind, implies too much, it gives appropriate emphasis to the part which the chemists are playing in the great struggle.

Ever since the tension of the bowstring as a means of propelling projectiles was displaced by the expansive force of the highly heated gases generated by explosives, the chemist has had to assume a large responsibility for the successful supply of fighting materials and the outwitting of the enemy. With the progress of the centuries, this responsibility has grown in intensity and has become so ramified as to include the development, not only of explosives, but also of projectors and projectiles, the production of an endless variety of materials for use at the front, and the equally important task of providing for the maintenance of adequate food supplies, and of necessary industrial activity at home.

And to all this has now been added a task which, in view of our general belief in an honorable regard for international conventions, had been looked upon as outside all bounds of probability, namely, that of pitting our best brains against those of the enemy, for the discovery of more and more insidious and cruelly poisonous gases, and of methods to protect our own brave fighters from each new and more vicious device of our opponents. However much we may condemn gas warfare as unsportsmanlike, and deplore the expenditure of intellectual effort which it is demanding, we must play the game; and in this phase the war is pre-eminently "a chemists' war."

The importance of the chemist in our own military organization has been definitely recognized by the creation of a Chemical Service Section of the National Army, with a lieutenant-colonel as its ranking officer, and provision for a personnel of about thirteen hundred officers and men. The important functions of this section are the correlation of information accumulated at home and at the front, and the induction into chemical service of drafted men with chemical training. The establishment of this section not only is a distinct step forward in the interests of military service, but affords a too long delayed recognition of the parity in importance of chemical engineering with that of the other and older engineering professions.

Among our allies it is known to be true, and among our enemies it must be true, that chemists are almost to a man throwing their whole and best energies into the solution of war problems. Plans are already maturing for the recruiting of the forces of our allies by sending men to their chemical laboratories, as well as to fight in the field.

If the chemist is concerned with the problem of feeding the guns of the expeditionary forces, he is no less concerned with a problem which has become equally serious, that of feeding the bodies of the fighting men, and of those of the entire population of the allied nations. Conservation and the regulations of our food administrators are topics of daily thought and conversation. With these affairs the chemist has much to do, through the improvement of the preparation of foodstuffs and by providing safeguards against frauds and against the general introduction of insufficient dietaries.

But, besides conservation, there must be stimulation in production of foodstuffs, notably through intensive agriculture. It has been stated that a reduction of the cost of soluble nitrogen compounds to a price comparable with that prevailing in Germany before the war, would add a billion dollars to the annual value of our crops. The significance of this statement today does not, of course, lie in the increase in monetary worth, but in what it would represent as a war resource. This phase of the chemists' problem is, moreover, closely linked with that of the ammunition supply. Nitric acid and ammonia are necessary for both ammunition and fertilizers, and the failure to maintain an adequate supply of both would be fatal to the success of any of the warring nations.

II

An explosion is the result of the rapid generation of gases which are at the same time highly heated, causing them to expand with great force, in accordance with well recognized principles of physics. If, for example, a flame is applied to a mixture of illuminating gas and air, the temperature of the gas mixture at a point near the flame is raised to the so-called ignition point, chemical combination ensues, and new and highly heated gaseous products result. If the gas mixture is confined, the confining walls are often disrupted.

The explosives in common use differ from the mixture just described, in that they are not gaseous at the start. They are sometimes liquids, but are generally solids, and are made up of bodies which, when they are subjected to heat, or to certain sorts of shock, promptly go to pieces, yielding mostly gaseous products and liberating large quantities of heat. Almost without exception these explosives are made by the action of nitric acid upon such materials as glycerine, cellulose (absorbent cotton is nearly pure cellulose), or certain materials, like toluene, derived from the heating of soft coals out of contact with the air, as in the production of illuminating gas. They are among the so called " intermediates " from coal tars.

While to the casual observer the breaking down of the various explosives would appear to proceed practically instantaneously in all cases, accurate measurements show that there are appreciable differences in the rates of decomposition, and these differences determine the type of usefulness of a particular explosive. For example, a mixture of gasolene vapor and air is an efficient mixture for the development of power as applied to the piston of the engine of an automobile; whereas a mixture of hydrogen and oxygen, while developing greater explosive force, does so with such rapidity that this energy cannot be effectively taken up by the mechanism of such an engine, and is wasted as a dangerous disruptive force on the walls of the cylinder. An explosive which is designed to produce a maximum of disruptive effect, as in shells, mines, or torpedoes, or in sapping or mining operations, must be of the rapid type known as a " high explosive." A propellant, on the other hand, must be of such a character that the decomposition goes on with progressively increasing rapidity, thus steadily increasing the pressure developed behind the projectile, until it acquires its maximum velocity at the moment when it leaves the barrel of the gun.

To the chemist belongs the responsibility for the scientific development and improvement of these explosives. The problems are many sided. It is not enough to produce materials which, in a qualitative sense, exhibit properties which would class them with one or the other of the types of explosives just outlined: their effects must be quantitatively measured, and must be capable of exact reproduction at will. This is rigidly true of the propellants, upon the performance of which the accurate placing of shells, when the range has been determined, absolutely depends. The limitations laid down in the specifications for such explosives permit but a very small percentage of variation in the pressure produced in the chamber of the gun. This uniformity, in turn, can be attained only by the most rigid scientific control of the manufacturing operations by the chemist, and the utmost care in guarding against subsequent deterioration during the interval between manufacture and use. Indeed, the latter phase of the problem is one of great significance. Explosives are, almost or quite without exception, composed of substances which are endothermic in character: that is, heat energy is absorbed when they are formed, and this heat is liberated when they decompose. Heat, moreover, accelerates all chemical changes. Hence, if any (even a very small) part of an explosive mass begins to break down from any cause, the heat liberated promotes the rapidity of the change, and this, in turn, is communicated to neighboring portions, until the entire mass may be involved and destroyed.

So far as it is humanly possible to do so, all exciting causes must be foreseen and forestalled; and the lack of stability during storage has necessitated the discarding of many materials otherwise of great promise. Moreover, apparently slight variations in conditions of manufacture, due to ignorance or carelessness, may result in an imperfect product, which will begin to undergo spontaneous decomposition in storage, with a final result like that outlined above. Conditions such as these have been the cause of many mysterious explosions.

As an instance of extreme instability, the behavior of a substance known as nitrogen iodide may be cited. This compound explodes with great violence if touched with a feather,—a literal instance of being " tickled to death,"—and often it is exploded by the mere friction of the air when moved from one spot to another. Such sensitiveness as this obviously places a substance outside the bounds of practical usefulness; but all explosives are, in the very nature of the case, unstable, and their preservation involves the study of factors which differ from this case in degree rather than in kind.

To attain the extreme velocities and the enormous ranges concerning which we almost daily find our credulity taxed to its limit, it is obvious that the temperatures and pressures developed within the chambers and barrels of the heavy guns must be very high. As has already been pointed out, both must be known within small limits, and be producible at will. Stimulated by these great temperatures, the products of decomposition of the explosives exert an erosive action upon the interior of the chamber and barrel of the gun, and soon injure and ultimately destroy the rifling. It is this, with the effect of temperature on the steel itself, which limits the life of the guns; and it is, again, the chemist's task so to choose his materials for both the fabric of the gun and the explosive charge, that there shall be a minimum of erosion with a maximum of ballistic efficiency.

Nitroglycerine is doubtless the most generally known, by name at least, among the high explosives. It was first manufactured on a large scale by Alfred Nobel, of peace-prize fame. It soon proved to be a treacherous substance to transport in liquid form; but Nobel found that the risk could be greatly reduced if the liquid is absorbed in a silicious earth. Nowadays wood-pulp and other absorbent materials are employed, and constitute what is known as dynamite. But nitroglycerine, if used alone as a bursting charge for shells, has not proved itself to be satisfactory, and has been displaced by such materials as picric acid, and, notably, trinitrotoluene, which is frequently designated as T.N.T. This substance is distinctly less unstable. It can be melted and poured into shells without danger. Picric acid also may be handled without great risk, when pure. It tends, however, to react upon metals, with the formation of derivatives of picric acid (picrates), which are treacherous, and this circumstance has led to serious explosions. While trinitrotoluene is somewhat less powerful than picric acid, its use is more general at present.

Recently it has been found possible to secure excellent results from an explosive called "amatol," which is made by mixing with T.N.T. a considerable amount (even as high as eighty-five per cent) of ammonium nitrate. This common and apparently innocent laboratory reagent becomes an effective disruptive agent when its decomposition is once started by the explosion of the admixed trinitrotoluene. Aluminum powder, which in burning generates an exceptionally large amount of heat, is also sometimes added, and this mixture is called "ammonal."

The raw materials from which picric acid and trinitrotoluene are made are phenol, or carbolic acid, and toluene. Both are constituents of the tar resulting from the heating of soft coals in retorts, to produce illuminating gas and coke. Great quantities of coke are used in the production of iron and steel; but, in the past much of this has been made in what are known as "bee-hive" ovens, from which the volatile products from the heating of the coal, including phenol and toluene, escaped into the air. At the present time, much progress has been made in the construction of closed retorts for the coking of these coals, thus making it possible to collect the volatile products. By this means the available supply of toluene is much increased. Under the best of conditions, however, some toluene, on account of its volatility, passes on with the illuminating gas, and auxiliary plants are now being installed in some of the larger cities to strip this toluene from the gas before it passes to the mains.

Picric acid is chemically known as trinitrophenol. Phenol is more commonly called carbolic acid. While phenol is found in coal tar, the amount is not sufficient to provide an adequate supply to meet the demand for picric acid; and to meet the deficiency, it is necessary to resort to the synthetic preparation of carbolic acid from benzene (benzol), which is a somewhat more abundant constituent of coal tar. The synthetic processes employed are akin to those which the chemist uses to transform the ill smelling and unsightly coal tar into the varied dye stuffs which add so much to the cheerfulness of life, or into the synthetic drugs upon which physicians rely for the alleviation of pain and for the maintenance of antiseptic conditions in home and hospital.

The handling of both picric acid and trinitrotoluene, while reasonably safe if intelligently done, so far as danger from explosion goes, has other disagreeable features. The operatives gradually absorb the material into the circulatory system, and in time it acts as a poison. The trinitrotoluene eventually affects the liver, and jaundice ensues, with such intensity that the operators often turn a bright yellow. These cases are not infrequently fatal, and all are serious and of long duration, with doubtful final issue. In England thousands of women are engaged in the shell-filling plants, and they have shown great courage and loyalty in taking their share in this work, in the face of inevitable disfigurement, or permanent disablement.

III

But the problem of the explosive shell does not end with the mere selection of a material to fill it. If its mission is to shower the enemy with shrapnel, the chemist must so choose his exploding charge as to give efficiency in force and distribution; if the shell is to destroy barbed-wire entanglements, its fragments upon bursting must be relatively large and heavy, which means a different shell design and bursting charge. The gas shells, referred to later, also present many peculiar problems, and there are doubtless many more, peculiar to torpedoes and mines.

Among the modern explosives, gunpowder has lost its former prestige. In its development of explosive force it lies between the high explosives, like nitroglycerine, on the one hand, and smokeless powders on the other. Gunpowder fell from its former high estate largely because it gives aid and comfort to the enemy by enabling him to locate the guns of his opponent by the smoke which it produces.

In the search for a smokeless powder, that is, for an explosive which on decomposition would yield only gaseous products, attention was first turned to gun-cotton, or nitrocellulose. Raw cotton may be chemically treated for the removal of nearly all materials except what is chemically known as cellulose. It is similar to starch and sugar in its chemical character, and explosives can be made also from these latter materials, although none are of much importance. The cotton, after such chemical treatment, is like the familiar absorbent cotton. If this is treated with a mixture of nitric and sulphuric acids, it is converted into nitrocellulose, a material which is, incidentally, used in the manufacture of celluloid, in the dressing of patent leather, and in collodion.

Indeed, it has been made a reproach to the chemist, that he has allowed his art, which first brought carbolic acid to the surgeon's aid, and collodion (liquid court-plaster) to protect our wounds, to be turned to the production, from these same materials, of death-dealing explosives. But, as Dr. Baekeland has pointed out, it would be equally logical to condemn the art of printing, because it has been, and may be, used for the dissemination of lies and calumnies.

After washing and drying, which require great care, nitrocellulose is capable of use as an explosive. Curiously, the microscopic structure of the cotton is hardly altered by this treatment. It has the same open texture, and, if ignited, or detonated, the decomposition proceeds through the mass with such rapidity that nitrocellulose, thus prepared, proves to be a high explosive rather than a propellant, and is so used today in considerable quantities. But it has been found that, if nitrocellulose is dissolved in some solvent, or mixed with enough solvent to cause gelatinization, the resulting product, on drying, has the desired properties of a propellant: that is, it decomposes relatively slowly. Still later, it was found that admixtures of nitroglycerine with nitrocellulose gave desirable results, and the smokeless powders of today, known by various trade names, such as cordite, poudre B, etc., are blended mixtures, the composition of which is determined only after the most careful laboratory and ballistic tests. Each type of gun, from the small arm to the largest cannon, requires exact and extensive study. In these investigations, again, the chemist is indispensable.

A smokeless powder, if ignited in the open air, burns relatively slowly. A stick of it may safely be held in the fingers until nearly consumed; but at the high pressure and temperatures within the guns, this combustion proceeds with relatively great velocity. The smokeless powders are usually ignited by a primer, which is frequently a small charge of black gunpowder. Most other explosives are fired by means of fulminates, the most common being mercury fulminate, which is made from mercury, nitric acid, and alcohol. These fulminates explode by friction, or a blow, and produce sufficient heat locally to detonate the explosive charge. The fulminates are sensitive rather than powerful. They demand the greatest caution in both manufacture and subsequent handling. They must explode with unerring accuracy when struck by the exploding mechanism, as is evident in the case of the machine guns used on aeroplanes, the firing mechanism of which is so synchronized with the revolutions of the driving shaft, that the bullets pass between the blades of the propellers when the latter are revolving rapidly, and the slightest retardation in firing would be attended by fatal results.

IV

It is within the bounds of truth to assert that the changes in both munitions and ammunition which have taken place since the beginning of the war have equaled or exceeded those of preceding centuries. The rapidity of development, and the adaptation of these constantly changing conditions and demands, have been equally marvelous among all the warring nations; and these changes are still going on to an extent which makes assertions of today almost obsolete tomorrow. But in no particular has this been so true as in the gas warfare which has assumed an importance scarcely secondary to the use of explosives and missiles.

The first gas attack was of the so called "drift-gas" type. Chlorine gas was discharged in quantity from the enemy trenches, and was carried by a favoring wind over the allied trenches, with disastrous results. Chlorine is a heavy gas, green in color and exceedingly irritating to the membranes of the air passages, even at great dilution. This gas may be liquefied under high pressure in steel cylinders; and great numbers of these cylinders were placed at intervals of a few feet along the front of the enemy trenches, and pipes laid outside, opening toward the trenches of the allies. The gas was simultaneously discharged from these openings, and with a light wind it held close to the ground. The effect was nothing less than appalling. It is said that, had the enemy realized the full effect of this gas-attack and followed it up, they could have pushed completely through the allied lines. It is probable that they were not themselves adequately protected against the gas, and were uncertain as to what they would find in the gassed area.

This attack, marking, as it did, a new and evil epoch in military affairs, produced first a feeling of incredulity, which, however, soon gave place to the utmost exertions to devise means of protection, and later to devise varied and more vicious materials for offensive use in this relentless form of warfare. Drift-gas attacks, while still employed, have largely given place to gas shells, which are fired from guns or mortars, or used as hand grenades. The shells which have been used contain as much as six pounds of materials which are themselves easily volatile, or are atomized by the bursting of the shell, and thus impregnate the atmosphere around the spots at which they explode. They can, of course, be placed with the same accuracy as a shrapnel or other explosive shell, and such gas shells are now used in great numbers before an attack in force, and are also intermingled with the explosive shells during an attack. Because of the penetration of the gases into dugouts and gun shelters which are practically proof against missiles, positions may be captured and gun crews put out of action after withstanding long periods of bombardment.

Nearly all the materials employed in gas warfare will produce fatal results if inhaled in sufficient concentration, and the aim of the warring chemists is to devise new gases which will pass through the masks in use by the enemy before they can be detected and the troops safeguarded, when such safeguarding is possible. Certain gases have, however, for their more immediate object, the irritation of the eyes (the lachrymatory gases, one part in a million of air being effective), temporarily blinding the victim; others are designed for the irritation of the nose (the "sneeze gases"), making it almost impossible for the fighter to overcome the tendency to throw off his mask; and others again, for the production of burns when in contact with the flesh, which are of a most distressing character, and, even if they do not cause death, incapacitate the victim for service for a period of months. The last-named gases are likewise toxic and lachrymatory to a high degree. The so called "mustard gas," a compound somewhat similar in character to mustard oil, but far more of an irritant, has proved particularly destructive, and doubtless accounts for many of the casualties in recent attacks. The mustard gas is discharged in liquid form and penetrates ordinary clothing, even if the masks prevent its inhalation. It also saturates the ground, and troops taking shelter in shell holes are often burned by contact with this ground.

It is often true that the harmful effect of the poison gases when inhaled is not immediate, but is the result of a slow interaction between the moisture of the lungs and the chemical employed. One, methyl sulphate, for example, yields wood alcohol, a violent poison, and sulphuric acid. The men are frequently incapacitated hours after a gas attack which at the time appeared to have been without serious result. The physiological effects are usually insidious and cruel. Smoke shells containing "sneeze gas" are sometimes first used, and these are immediately followed by shells containing violently toxic gases. If the men are affected by the "sneeze gas" before the masks are put on, it is very difficult for them to keep them on, because of the continued paroxysms of sneezing.

Chlorine itself is now comparatively seldom used alone, but nearly all the poison gases are compounds containing chlorine, and the ability to supply adequate quantities of this gas, which is obtained by the electrolysis of a solution of table salt, is an important factor in the prosecution of the war. The processes for its production have been well worked out by the electrochemist. It is a question of installation of adequate large-scale apparatus.

The task of the chemist naturally resolves itself into the development of protective and preventive devices (the defensive side), and the devising of new toxic gases (the offensive side). At the time of the first gas attack the allied forces were without any means of protection, since, although some inkling of a possible use of poison gases had been obtained, it was not believed that those provisions of international agreements which were intended to eliminate such practices would be violated.

Only the simplest expedients could be immediately employed. After a number of gas attacks in April and May, 1915, there were few attacks until December, 1915, and in that interval, with incredible rapidity, comparatively efficient masks were devised and manufactured, and these are being constantly perfected. But even at best, they are a serious handicap to the activities of the men, and much of the efficiency of gas warfare comes from the depressing effect of wearing the masks for long periods. This is known as "neutralization" of the opposing infantry force; and even if it constituted only an annoyance, it would be remarkably effective. When, for example, ammunition and supplies have to be brought to the front, there are almost inevitably exposed points, or cross roads, where great confusion of traffic occurs. These spots are frequently discovered by the enemy, and, by planting a few gas shells in the vicinity, the workers are obliged to don their masks, which in these night operations makes confusion worse confounded, and may even cause serious embarrassment in the delivery of needed supplies.

The masks now used are nearly all of the canister type: that is, the inhaled air is drawn in through a canister containing certain materials which will react with, or absorb, the gases before they enter the mask itself. This mask consists of a close fitting fabric, containing usually more or less rubber in its structure, and held in place by elastic straps over the head. The exhaled breath escapes from the mask through a rubber valve which opens only from pressure from the inside. The time allowed to put on the mask, when slung by a strap from the neck, is under ten seconds. It is carried in a canvas case, and when the forces are within two miles of the front, they are required to wear the outfit in the "alert" position, ready for instant use, night and day.

An important feature which has been the occasion of much scientific study is the eye-piece of the masks, to avoid dimming from the moisture accumulating within. Anti-dimming preparations have been found, and lately, as the result of many experiments, materials devised which reduce this difficulty to a minimum, under ordinary conditions of use.

Great improvements have been made in the effectiveness of the absorbent material used in the canisters, and this, in turn, has increased several fold the general efficiency which it was possible to attain at the time when the manufacture of the masks was first undertaken, and hence to diminish the amount of material to be placed in the canisters. The significance of this will be understood when it is realized that there is a considerable friction to overcome when the inhaled air is drawn through the canister. This was so great in the earlier masks, that it made necessary a suction on the part of the wearer of the mask equal to that required to raise a column of water in a tube to a height of six inches; an effort not incomparable with that made by many asthmatic sufferers to draw air into the lungs. This frictional resistance has been materially lessened by the improvement in the protective materials, and every reduction, however slight, is a great boon to the troops.

The materials used in the canisters are selected to react with gases of an acid character, and with those capable of destruction by oxidation, a process like that generally known as combustion. Much reliance is, however, placed upon the absorptive power toward gases exhibited by many porous substances, notably, high grades of charcoal. The principle is the same as that utilized in the "charcoal filters" sometimes attached to our faucets to clarify water supplies.

Of late a new problem has been presented, because of the use of gases in the form of "smoke clouds," which easily pass through the protective materials contained in the canisters. This has necessitated the addition of another filtering medium, and has necessarily added somewhat to the resistance to be overcome.

How serious this "neutralization" of troops through the continuous wearing of masks may be, is illustrated by the conditions which obtained before one of the recent violent attacks on the Western Front. It has been stated that the enemy fired gas shells (mainly mustard gas) at the rate of two hundred thousand shells per day for four days, each shell probably averaging about five pounds of material. While the gas masks will protect the wearer from the inhalation of this gas, they must have required one or more renewals during this period. This attack was followed by a smoke-cloud attack which necessitated the use of the extension filters, thus subjecting the troops to added labor in breathing, after days of constant use of the mask. The physical strain under such conditions cannot fail to have been severe. It is not, however, to be supposed that the enemy was allowed to spend his time in full comfort.

As a means of detecting the approach of a toxic gas, canaries and white mice are placed in the trenches, as they are peculiarly sensitive to these chemicals and show signs of distress from dilutions which are unnoticed by man, especially when the gases are nearly odorless.

Of the offensive side of this gas war it is obvious that little can properly be made public. There is reason to believe that our American chemists are making valuable contributions in this field.

V

Another type of gas problem is that presented by the necessity for protection against the gases resulting from the explosion of shells aboard our war vessels, and from those gases which issue from the guns when the chambers are opened for recharging. To this must also be added the risk from poison-gas shells which may be so designed as to penetrate armor plate before explosion. Carbon monoxide is a notable constituent of these gases. So long as the ventilating systems are intact, the men in the turrets (where the guns are situated) are protected; but in the event of damage to such systems, other protection, in the form of masks, is needed.

Again, the submarines present a series of problems. For example, the presence of hydrogen, which may escape from the storage batteries and will easily form explosive mixtures with air, must be promptly detected. These are but two of many similar problems coming from the navy with which the chemist is busy and for which solutions have been found.

Much has been done in the production of efficient smoke screens for use in the trenches, and notably as a protection against submarine attack. The chemists have perfected devices by which combinations of chemicals are used to produce clouds of remarkable density, some white, some black, which hang for a considerable period above land or water, and effectually obscure what is going on behind them.

To determine the accuracy of artillery fire, it is necessary for the aerial watchers to be able to trace the path of a portion of the shells by day or by night. This may be accomplished by attaching to some of the shells inflammable materials—phosphorus for example, which is ignited when the shell leaves the gun and leaves a trail of fire at night, or of white smoke by day; or the point at which they land may be indicated by a similar phenomenon, taking place at the moment of impact. Aircraft of the type of the Zeppelins, or the observation balloons, are filled with hydrogen, and it is to this that their great vulnerability is largely due. Incendiary bullets, carrying inflammable materials, on piercing the envelopes of these craft, ignite the hydrogen, and destruction follows. Bullets and shells used in anti-aircraft guns must also be traced to determine the effectiveness of an attack, and this is accomplished in a similar way.

If the advent of a " safe and sane Fourth " has served to restrict the activity of the pyrotechnic industries in this country, the war has called into service the knowledge and skill of their chemists and operators. Signals for night use, and those that develop colored smokes for day use, incendiary bombs for the ignition of buildings and of grain fields and stars for illumination of battlefields, are among the many devices that must be produced in enormous quantities, and with the highest attainable degree of uniformity and reliability. Pyrotechnic research is today an important division of the work which is going on in various laboratories throughout the country. The educational institutions and many individuals and business organizations have placed their facilities at the command of the Government, and in these laboratories, as well as in those of the Government itself, a large corps of chemical investigators is busy with the study of the methods of safeguarding our forces against gas attacks, and in perfecting procedures which will lead to the production of those toxic gases which have already proved effective, as well as of such new ones as may give promise of even more deadly effects.

It is a matter of common knowledge that we in the United States were confronted with a most serious situation with respect to dyestuffs at the beginning of this war, on account of our dependence upon imported colors. This situation has been splendidly met by the chemists of the country. But the situation was serious in other countries also, for the demand for dyes for uniforms was made on an unprecedented scale. The chemists in the allied countries rose to the occasion, and produced synthetic indigo for navy blue, using in part new processes, and also produced the necessary dyes for the khaki and olive-drab uniforms. This, although simple in the telling, involved extensive and intensive modifications of manufacturing processes and plants, and is fairly representative of many of the industrial crises which the chemist has been called upon to meet since the opening of the war.

Whether the role of the chemist in this war transcends in importance that of the members of other professions, to such an extent as to warrant the designation "a chemists' war," may reasonably be questioned; but there can be no doubt that the contributions of the chemist to the prosecution of the war, of which a few typical instances only have been outlined, fairly substantiate a claim to a position of great responsibility for its successful conduct, at home and in the field. Much has been done, and much must still be done. Mind must be pitted against mind while the struggle lasts; and when it ends, and our country realizes, as it must if it expects to hold a dominating place in civilization and industry, that scientific methods alone afford a sound basis for federal and industrial development, the achievements of the chemist in the war should entitle him to increasing respect and to a highly responsible share in national life and in the councils of those who will direct our national policies.

PROGRAM FOR THE NEW TERM

Summer courses will allow men back from service to catch up with their classes

The program of exercises for the remainder of the current school year includes twenty-two weeks of study with the examinations in extra time. This extension of time is of interest inasmuch as the regular term is comprised generally in fifteen weeks. The extra seven weeks will be valuable for the men who were members of the S. A. T. C., who decide to continue studies at the Institute, and will afford them time in which to make up the losses in exercises due to military duty.

Till December 21 the regular exercises on the schedule adopted to fit the requirements of the S. A. T. C. continued, the term ending on that day.

On Monday, December 30, Technology resumed its position as a school devoted to engineering studies leading to degrees, and the time table for the remainder of the school year is as follows: Period of 11 weeks, December 30-March 15; examinations, March 17-22, 1919; vacation, March 24-29; period of 11 weeks, March 31-June 14; examinations, June 14-21.

For the regular students, excepting the sophomores who will have summer civil engineering camp, vacation will be as usual. There will be the usual summer courses in much the same variety as heretofore. The next school year will begin on October 6, 1919.

COLONEL WILLIAM H. WALKER TALKS ON POISON GAS

Former head of Chemical Engineering department at Technology lifts the veil of mystery at last — authoritative interview reprinted from the New York Times

THE lifting of the censorship has permitted the telling of no military story so awe-inspiring, so profoundly affecting as the one here related for the first time in public print. This strips the veil from a hidden page of history just enacted and adds another lustrous chapter to the volume of stupendous American achievements of the last year. It concerns the creation of a thunderbolt, the most terrible known to man; and the holding of it, leashed, over the bowed head of Germany, giving the United States the power to annihilate that reeling nation. So efficacious was this thunderbolt that the mere thought of it was sufficient for the coup de grace.

If the reader will pardon this introduction I will relate the story as it came to me, first hand.

Twenty-six miles from Baltimore, on the edge of the Government's vast Aberdeen ordnance proving grounds, is a three-hundred-acre tract, fenced off even from the comparative publicity of the conventional big guns, guarded from prying eyes along every rod by soldiers with drawn bayonets. Twelve months ago it was a Maryland farm. Today it is the largest poison gas factory on earth. It can produce, probably three or four times over, more mustard gas, phosgene, chlorine, and other noxious fumes than the intensified war output of England, France and Germany combined. It was just completed and ready to function for the $60,000,000 invested there when the armistice was signed on November 11. Now it lies silent and idle like the great cannon along the Lorraine border, but ready to operate at a moment's notice.

The director of the United States Chemical Warfare Service is Maj.-Gen. William L. Sibert. The commanding officer, Col. William H. Walker and one of his assistants, Lieut.-Col. George Chahoon, took me over the plant and initiated me into its mysteries, explained the processes of production, outlined some of the little-known features of gas warfare, and indicated what an essential element in the prospective allied attack next spring this product was to be. Formerly Colonel Walker was professor of Chemical Engineering at the Massachusetts Institute of Technology.

As we went over this enormous plant, sprinkled over the old farm, each unit well separated from its neighbors to avoid concatenated explosions, Colonel Walker, once the best lecturer at the Boston Technology expounded the theory and the practice, the history and the possible future of the diabolism we were surveying.

"It is not apparent that the Germans started the war with the intention of using poison gas," he said, "for they did not use it until April, 1915, and then despite their boasted efficiency, they did not understand the effectiveness of the fiendish stuff they were using. Had they done so, history might make different reading today. For instance, when they first used gas (it was chlorine with which they started on April 22, 1915), they waited twenty-four hours before following up with a bayonet attack, evidently fearful that the gas had not dissipated. As a matter of fact the gas dissipated within thirty-five or forty minutes after its release, though in that time it annihilated eighty per cent of the Canadians, Turcos and French opposing it. If the Germans had attacked within an hour they would have taken Calais that day. There was nothing to stop them.

"Another thing that makes me think they did not intend using poison gas when they began the war is that they had no proper meteorological charts of Northern France. If they had had these necessary charts they would not have wasted so much time and so much gas as they did waste. It is a fact that the prevailing winds in Northern France are about seventy-five per cent from a southerly or southeasterly direction. This left the Germans only twenty-five per cent of the time in which they could use gas as they did to begin with, relying on the wind to carry it across the line. Later they devised guns and mortars, but if they had begun with these methods and had made gas in sufficient quantity, there can be no doubt that the war would have ended in their favor very early. There is no doubt in my mind that their inability to make gas in sufficient quantity accounts for their halt in their last great drive last summer. Of that later.

"The French and English, as you know, were reluctant to use gas, deeming it inhumanitarian. Our Government suffered from the same indecision in the early months of our part in the war. However, we came to it in time, just as did the French and English. But, although the English finally utilized every available facility they could command in the manufacture of toxic gases, their total production at its highest point never went above an average of thirty tons a day. The best the French could do was much less than this. You can get the whole story in one sentence when I tell you that our American capacity for September and October was on an average of two hundred tons a day. Remember that these figures are not in pounds, as powder figures are usually given, but in tons. And a drop of gas, properly placed, kills or incapacitates."

"What was the German production?" I asked.

"We do not know," replied Colonel Walker, "but from available data and the estimates of military observers on the ground we do not think it was over thirty tons a day. It may have been fifty tons a day, but certainly no more.

"It was last October before the American Government decided to manufacture poison gas on a scale commensurate with the rest of our military preparations. It was November when ground was broken here, so that what you see is the work of less than a twelvemonth."

What I saw was a city of brick kilns, high chimneys, correlated vats in innumerable series, repeated shot towers, miles of railway, miles of elevated pipe lines, machinery of the finest type and the most perfect installation, housed in concrete and sheet iron, built apparently for permanence. It was all only a few miles from Gunpowder Creek, where were concrete piers built in the midst of the once fine duck hunting preserves. Gunpowder Creek runs into Chesapeake Bay, so that vessels loaded with the gases direct from the factory sailed to Havre without a stop. The Government's investment here is $60,000,000. Elsewhere there has been spent, at various subsidiary plants, about $12,000,000. Thus all told the United States has spent about $72,000,000 in the manufacture of toxic gases, practically none of which have any commercial value. The basic elements are salt, sulphur and alcohol, which, broken into component parts and chemically reunited, in some cases by means of heat, in others by means of cold, again by force of gravity, are caused to form the mustard gas, the phosgene and the phosphorus, the chlorine, etc., which have been found efficacious in warfare. For the cold processes vast refrigerators were built. These cover acres. Half a mile away were enormous boilers and hot rooms for fusing. Then curious towers of spindle steel looking like miniature Eiffel Towers, scattered about the grounds, support pipes down which, in a different process, are dropped two chemical elements which thus are forced to fuse by gravity.

Chiefly impressive, once one became accustomed to the thought that all this ingenious, costly mechanism was built to generate poison for the sole purpose of horribly maiming and frightfully killing, was the orderliness, the immensity, and the stability of the plant. The Bethlehem Steel mills or the Bridgeport Rifle Works are no better built.

"The most remarkable thing about this plant may not be apparent as you look at it," said Colonel Chahoon. "It is the fact that when the Government started to build it there were no existing models for some of the machinery needed. That is where Colonel Walker came in. He literally invented this factory while it was in process of being built. There is nothing like it anywhere else in the world, and it had to be created and operated as we went along. The French and the British both sent their best experts to assist us, but they stayed to get pointers to take back to their own governments. Major Auld, the chief British expert on war gas, said frankly, 'I came to teach, but I stay to learn.'

"Then we had any amount of difficulty, as you may imagine, with labor. In the beginning, when we were only building roads and putting in foundations, it was not so bad, but when we got our first vats to working and it became known among the workmen that the poison was actually being produced our real troubles began.

"One day last summer an incident occurred that will illustrate what we went through. The dust was very deep on the roads, and along one of them came a heavy ox team, which kicked up an enormous cloud of dust. Some carpenters working a piece off in the woods saw it, and some one started the cry, 'A poison tank has burst." That was enough. Those carpenters started beating it for the railroad two miles away, and as they ran they fast picked up company. By the time they reached the tracks there were two thousand or three thousand laborers in a panic-stricken flight. The block signaler on the railroad saw them coming, set all his blocks, and ran. For three hours that afternoon the entire Pennsylvania system was tied up. In a bunkhouse eight negroes were sleeping. It being a hot summer afternoon, they were devoid of clothing. They heard the false alarm as the van of the flying crowd passed, leaped from their bunks, and ran, naked, down the tracks, reached an empty box car bound for Philadelphia, and which had just escaped the block set, entered it, and were seen no more. From that day to this no one knows what became of them. They didn't send for their clothes or ask for their pay.

"Things like this happening made our job increasingly difficult. Finally we found that no one could or would do the work except soldiers, and the army then detailed to us the necessary allotments. When the armistice was signed we had more than seven thousand men, all drafted American citizens, doing the work for $30 a month, but without honor or glory. At one time we had over fourteen thousand.

"The work of these boys is beyond praise," said Colonel Walker, who spoke of this phase of the activity with deep, affectionate feeling. "I have been striving to get the army authorities to recognize it by bestowing a Service Medal. I contend that no soldier on the firing line is more entitled to it. These fellows have been here risking their lives, day by day, for a pittance. Nothing but patriotism induced them to do it. And every man knew that every time he went to work he stood in imminent danger of serious injury and of losing his life. Just look at our casualty records."

I did look at the casualty records. I went through the hospitals, two enormous dormitories, perfectly equipped, and permeating the atmosphere of a base hospital in France. I saw boys who had been struck down by the fiendish gases while at work; some with arms and legs and trunks shriveled and scarred as by a horrible fire, some with the deep suppurations still oozing after weeks of careful nursing. In one case a drop of mustard oil had fallen from a conduit pipe under which a soldier had walked, hitting his shoe. He wiped it off, thinking that made him safe. The next day his flesh began to peel. Now, five weeks later, his foot looks like a charred ember. Another had accidentally kicked over what he thought was an empty pipe. It contained phosphorus, which flew over his face and upper body. Now, weeks later, he is still a mass of horrible burns. Another case (one of the fatalities) was that of an officer who came in from the works to the office. He wore rubber gloves, as they all do when near the gases, but did not know he had been near enough to pick up the mustard oil. He picked up a chair and placed it in front of his desk, intending to seat himself. At that moment the telephone rang and he stepped to the wall to answer. A friend, another officer, entered and took the seat by the desk. Forty-eight hours later the second officer was dead. The first officer had accidentally rubbed mustard oil on the back of the chair. It went through the clothes and into the spine of the second.

In such an atmosphere one shudders and is quickly willing to indorse the recommendation of the commanding officer that a soldier who dutifully performs his duty there has earned a Service Medal fully as much as any soldier who faces the enemy's fire in the field.

In fact, when the figures are all finally published it may appear that no division in France has a higher percentage of casualty than was developed at the Edgewater Arsenal in Baltimore (the official name of the poison gas plant) in the month of August, this year. That was the month of excessive heat when the gases were most volatile and when the weather made the soldiers somewhat relaxed in their vigilance to avoid accident.

During that month the hospitals were filled at the rate of three and one-half per cent of the entire force in the mustard gas plant per day, or one hundred per cent casualty per month.

If that is the casualty which must be endured in making the stuff, can one imagine the casualty of the enemy who receives it? As to what the enemy had in prospect Colonel Walker further enlightened me.

"We had been working for some time," he said, "on a device whereby mustard could be transported in large containers by airplane and released over fortresses of the Metz type, and at last it was perfected, fully sixty days before the armistice was signed. Mustard has been found, for all-round purposes, to be the most effective gas used in warfare, because it advances comparatively easily and also because it is the most difficult to protect against. People used to think prussic acid was terrible. Well, the Germans discarded the use of prussic acid because it was too mild and used mustard gas instead.

"Our idea was to have containers that would hold a ton of mustard gas carried over fortresses like Metz and Coblenz by plane, and released with a time fuse arranged for explosion several hundred feet above the forts. The mustard gas, being heavier than air, would then slowly settle while it also dispersed. A one-ton container could thus be made to account for perhaps an acre or more of territory, and not one living thing, not even a rat, would live through it. The planes were made and successfully demonstrated, the containers were made, and we were turning out the mustard gas in the requisite quantities in September.

"However, there were obstacles besides the physical to overcome. The allied governments were not in favor of such wholesale gas attack by air. England was the first to accede to it, but France hesitated because of her fear of reprisals. Finally, the French government consented, but only with the proviso that the attack would not be made until our line had advanced so that there was no chance of the gas being blown back into French territory and until the allied command was in complete command of the air so as to insure safety from possible reprisals. These two conditions could not have been met before next spring. It was then that we planned to release the one-ton containers over the German cities which were fortified and so became subject to attack under the laws of war.

"We would have had ready in France for such an attack thousands of tons of mustard gas. There is not the slightest doubt in my mind that we could have wiped out any German city we pleased to single out, and probably several of them, within a few hours of giving the release signal.

"It was not to be. They capitulated and I am sure that a very big factor in that capitulation was the knowledge they certainly possessed of our gas preparations. What we were doing here was known to the German government. They knew that when this plant got into full blast their last hope was gone. They knew that if they had been able to make gas in even half the quantity we could produce here they would have swept over all France long ago. If there was any final argument to help them make up their minds it was our gas production.

"We closed down the day the armistice was signed. We had more than twenty-five hundred tons waiting on the piers ready for shipment. Somehow we had been cheated of our prey, but we were content. We felt sure the gas had done its work even though most of it still lay idle in our dooryard."

Already the Baltimore plant is being dismantled. The machinery is being carefully taken apart, oiled and wrapped and stored away—ready for the next war, should there ever be one. The parts which have come in actual contact with the gas are taken by means of tongs to the fields and buried. The gas itself will perhaps be taken to sea some day and dropped overboard. Being heavier than water, it will settle to the bottom, and if the fishes do not like it they can move elsewhere; the sea is wide. There is nothing else to do with the gas. It has no commercial value and there is enough of it, if properly liberated to kill every human being in the American continent.

Out of the $72,000,000 expenditure there is one bit of salvage. There is a little fifteen-ton consignment of brombenzylcyanide. This is an intense lacrymator (tear compeller), which has the effect of blinding people, but only for six or eight hours. After the temporary blindness the afflicted recover their normal eyesight. It has been suggested that this brombenzylcyanide might be kept in every police station throughout the country, in little cans with spraying nozzles, for use against mobs. It might be a sort of permanent insurance against any American eruption of the Bolsheviki; a merciful and almost painless but quite effective argument against lawless force.

Also, in the course of the experimental work in the laboratory, the chemist there discovered two new gas combinations, as yet unknown to any one in Europe or Asia, and more effective than phosgene or mustard gas. They were discovered so recently that there was no time to utilize them in this war. They have been stuck back in the safe and locked up—for future reference.—RICHARD BARRY, in the "New York Times."

THE AUXILIARY REPORTS PROGRESS

THE November REVIEW carried the general report of the Auxiliary to October 1. The chronicle of its undertakings since that time records a continuation of its various activities. The records have had particular care and have been frequently used by class secretaries, fraternities, departmental heads and others to locate special groups of men in service. In two weeks' time more than one hundred and fifteen important changes of rank or location were made on the cards. By exchange with the Technology Bureau in Paris and the Alumni Office and Technology it is the endeavor to have this list kept up to date and useful for all Technology men.

Since the signing of the armistice there has not been a day when relatives of our men have not used the office, sometimes to bespeak help in locating men reported as in hospital or missing in action, sometimes to ask that the director of the Technology Bureau at the American University Union in Europe locate a man and report.

Within a few weeks more than a score of men who have been overseas have called at the headquarters in the Rogers Building to tell of their pleasure in the work which the Auxiliary did overseas. "Just when we were most in need of a word of cheer," said one returned lieutenant, a Course IV man, "something would come along from you people back home,—a book, a note, or a parcel of magazines, and we were cheered to know that Tech had not forgotten us."

Through the generosity of Mr. A. F. Bemis, '93, it was possible to respond to Colonel Cole's request that the Auxiliary take over the furnishing of nurses and special supplies to the Student Army Training Corps Hospital. From October 31 to December 23 a total of a hundred and fifty-one (151) patients were admitted to this hospital.

Mrs. Henry P. Talbot and other Technology women established a hostess room for members of the Student Army Training Corps, and Student Navy Training Corps. Many men at the Institute used this room in the few weeks that these student training corps were mobilized.

A special fund was created by the gifts of Augustus Hemenway, Esq., Mrs. Richard Sears and Mrs. Oliver Ames, and this has been used to continue the hospitality to members of the Naval Aviation Detachment,—clubrooms, teas and hospital visiting.

The Workroom has made a notable record. Five trunks were sent to Mr. Gibbs at the Union in Paris in early December, and by special permission the shipment of goods by parcel post has been resumed. It is encouraging to read Mr. Gibbs' letters and to know how welcome these supplies are, and that the parcels and trunks do reach their destination. One overseas man who called assured the secretary that "Tech surely takes better care of her men over there than any other college." Perhaps he was a prejudiced witness, but at least it has been a friendly rivalry to make sure that everything possible was done at home and abroad to reinforce the men who had gone out to fight in the cause of democracy.

A detailed report of the Auxiliary and its sub-committee in the Workroom will appear in the next issue of the REVIEW.

A. L. GEORGE,
Executive Secretary.

THE HONOR ROLL OF TECHNOLOGY DEAD

January 15, 1919

These lists are made up from such data as is available, but if any readers have information which will add to or correct statements in these lists, they will please send the same to Mrs. George at the Rogers Building, Boston.

Vignal, Paul Gautier,	'15	Jan.	26, 1915	Killed in action in France.
Weeks, Kenneth,	'12	June	17, 1915	Killed in action. Foreign Legion in France.
Lamy, Henry,	'13	Sept.,	1915	Private, 132d Inf. 28th Co. Army of the French Republic, had been wounded in action.
Cross, Charles R., Jr.,	'02	Oct.	8, 1915	Ambulance Service.
Tillard, Thomas A.,	'09	Dec.	6, 1916	Royal Flying Corps. Killed in an aeroplane accident.
Tovey, Henry Oliver,	'18	March	22, 1917	Ensign, U. S. N., U. S. S. Maine. Lost at sea off Cape Cruse.
Lewis, Henry F.,	'05	April	12, 1917	Lt. 110th B'n. Canadian Forces. Wounded and captured in battle of Vimy Ridge. Died same day in Bavarian Field Hospital.
Heuter, Royal Robbins,	'06	May	5, 1917	1st Lt. Killed in motor accident before his departure for Plattsburg.
Robertson, Harry A.,	'10	May	11, 1917	1st Lt. Inf., Canadian Force. Killed in action.
Higgins, Edward E.,	'86	June	20, 1917	Ensign. Coast Defense of Conn. Died from overwork.
Bigelow, Braxton,	'10	July	23, 1917	Capt. 170th F. A. British Army. Killed in action.
Mason, Eric Wier,	'14	Aug.	12, 1917	1st Lt. Siege Art., British Army. Died of wounds.
Souther, Henry	'87	Aug.	15, 1917	Asst. Chf. Div. Aviation. Died at Fort Monroe after surgical operation.
Cobb, M. E.,	'87	Aug.,	1917	Capt. Q. M. Section, Res. Cps. Accidental discharge of revolver, Boston, Mass.
Clarke, James P.,	'15	Oct.,	1917	Capt. U. S. A. Died at Camp Bowie, Texas.

Breck, Francis Pratt,	'20	Nov.	6, 1917	U. S. N. Died at the U. S. Naval Hospital, Newport, R. I., of measles and pneumonia.
Gaillac, Emile B.,	'18	Nov.	7, 1917	Private, 101st Engrs. Died in France of bronchial pneumonia.
Eastman, W., Jr.,	'18	Nov.	8, 1917	Instr. Army Sch. Mil. Aero. M. I. T. Death by accident.
Holliday, John H., Jr.,	'05	Dec.	23, 1917	1st Lt. Design Section, Gun Div. Ord. Dept. Died in the Georgetown Hospital, Washington, D. C., of pneumonia.
Bryant, Chauncy Davis,	'14	Jan.	14, 1918	Private. E Co., 101st Engrs. A. E. F. Died of ptomaine poisoning in France.
Schroeder, Fred E.,	'18	Jan.	14, 1918	Private, 23d Rgt. Engrs. Died of disease, Camp Meade, Md.
Beach, George Albert,	'14	Jan.	22, 1918	Avia. Sect. Signal Corps. A. E. F. Killed in collision.
Stewart, Gordon,	'20	Jan.,	1918	Cadet Pilot, Army Air Ser. A. E. F. Died of spinal meningitis in France.
Couch, Edward S.,	'17	Feb.	6, 1918	2d Lt. B Co., 1st B'n. 22d Inf. Death by accident at Fort Leavenworth, Texas.
Jones, Charles E.,	'17	Feb.	15, 1918	Cadet. Avia. Sec. Sig. Cps. Observation Pilot. Killed in an airplane accident in France.
Kelly, John G., Jr.,	'14	March	18, 1918	Lt. 10th Engrs. Forestry A. E. F. Death by accident.
Nathan, T. C.,	'20	March	20, 1918	1st Lt. Avia. Killed in a flying accident at a training camp in Scotland.
Milliken, Alfred S.,	'14	March	30, 1918	2d Lt. D. Co., 6th Engrs. A. E. F. Killed in action.
Ingraham, Franklin T.,	'16	April	11, 1918	2d Lt. C. A. C. Died of pneumonia at home.
Ely, Dinsmore,	'18	April	21, 1918	2d Lt. Lafayette Escadrille. Died from injuries received in an airplane accident.
Sawyer, Enos C.,	'18	April	21, 1918	Btry. A. 101st F. A. Died of wounds received in action.

Greenough, Gordon,	'14	May	1, 1918	Lt. Ord. Dept. Died at the Reed Hospital, Washington, D. C.
May, James De Grier,	'18	May	9, 1918	Lt. Officers Hdqrs. Kelly Field No. 2, Texas. Killed.
Angell, Cyril M.,	'18	May	14, 1918	1st Lt. 147th Aero Sq., A. E. F. Killed in action. Was pilot in the same machine with W. K. B. Emerson, Jr.
Emerson, W. K. B., Jr.,	'20	May	14, 1918	2d Lt. 15th F. A., A. E. F. Killed in action while acting as an observer in the plane in which Cyril Angell was pilot.
Gould, Prescott W.,	'18	May	23, 1918	C Co., 102d Machine Gun B'n A. E. F. Killed in action.
Roper, George, Jr.,	'17	May	27, 1918	Cadet British Royal Flying Corps. Killed in an accident in England.
Wyman, Alfred Theodore,	'16	May	27, 1918	Lt. British Royal Flying Corps. Killed in an accident.
McDonald, Charles S.,	'99	May,	1918	Red Cross. Died in Paris.
Swan, Leroy Amos,	'17	June	19, 1918	2d Lt. Killed at Wilbur Wright Aviation Field, Springfield, Ohio, when airplane collapsed.
Parsons, Arthur M.,	'18	July	3, 1918	Killed by propeller. Received fractured skull at Taliaferro Field, Texas. 2d Lt. Aviation.
Santos, Alexander H.,	'19	July	15, 1918	Killed in an airplane accident, Brook Field, San Antonio, Texas. 2d Lt. Instructor in Aviation.
Wasgatt, Harold Clinton,	'19	July	19, 1918	Died of wounds received in action. 1st Lt. 59th Inf.
Brown, Malcolm Cotton,	'18	July	24, 1918	Lt. Royal Flying Corps, England. Killed in airplane accident.
Rogers, Newell Willard,	'14	Aug.	1, 1918	Cadet, Chanute Field, Rantoul, Ill. Killed while flying.
Wooten, James C., 2d,	'18	Aug.	3, 1918	2d Lt. 1st Aero Sq. A. E. F. Killed in action, France.
Simmons, Frank Ronald,	'10	Aug.	12, 1918	Capt. Intelligence Service, Paris. Died of pneumonia at Marseilles, France.

Pero, Donald Cary,	'19	Aug.	24, 1918	Ensign, U. S. N. R. F. C. Killed in a seaplane accident off Fire Island.
Atkins, Arthur K.,	'17	Aug.	1918	2d Lt. 165th Inf. Died of wounds received in action.
Herrick, William F.,	'11	Sept.	15, 1918	1st Lt. Air Service. Killed in an aeroplane accident in France.
Kimball, Scott P.,	'11	Sept.	28, 1918	Died of pneumonia, Camp Upton, New York.
Bates, Oric,	'07	Oct.	8, 1918	Died of pneumonia, Camp Zachary Taylor, Ky.
Waterbury, Charles Dann,	'95	Oct.	9, 1918	Died in Walter Reed Military Hospital, Washington, D. C., of bronchial pneumonia. Capt. Q. M. C. Engrs.
Smith, Winthrop F.,	'18	Oct.	10, 1918	Died of pneumonia at Bay Shore, Long Island. Ensign U. S. N.
Ware, Ernest A.,	'09	Oct.	11, 1918	1st Lt. B Co., 506th Engrs. Died of disease at Bordeaux, France.
Morrison, Phillips G.,	'16	Oct.	12, 1918	Died of pneumonia at Aberdeen Proving Grounds. Capt. Ord.
Stephens, Albert Leslie,	'06	Oct.	12, 1918	Lt. Engrs. Died at Camp Humphreys, Va., of pneumonia.
Miller, Eralbert Talmadge,	'14	Oct.	13, 1918	2d Lt. Constr. Div., Avia. Killed in a collision between a street car and an automobile in which he was riding at St. Paul, Minn.
Guething, Theodore H.,	'15	Oct.	15, 1918	1st Lt. Ord. Died at Picatinny Arsenal, Dover, N. J., of pneumonia.
Uhlinger, James Philip,	'16	Oct.	16, 1918	Sig. Cps. Avia. Died of pneumonia at Camp Meade Md.
Alexander, E. Porter,	'14	Oct.	22, 1918	1st Lt. Hdqrs. Co. 509th Engrs. Serv. B'n A. E. F. Died of disease.
Tierney, Harold Joseph,	'17	Oct.	22, 1918	Lt. Camp Vail, Little Silver, N. J. Died at Camp Vail of pneumonia.

Brownlee, Malcolm B., Jr.,	'11	Oct.	26, 1918	Pvt. 313th M. G. B'n A. E. F. Died of disease, Base Hosp., France, on Oct. 26, 1918.
Sprague, William G.,	'16	Oct.	26, 1918	Ensign, U. S. N. R. F. C. Killed in a landing accident at Ile Tudy, Finistere. Won Croix de Guerre for attacking and sinking an enemy submarine.
Althouse, George Nathan,	'15	Oct.	, 1918	1st Lt. H Co., 315th Inf. Died in hospital of wounds received in action.
Rideout, Percy A.,	'11	Oct.,	1918	2d Lt. Engrs. 30th. Killed in action.
Garnsey, Arlo E.,	'19	Oct.,	1918	Cadet A. S. S. C. Died of disease in hospital, Brest, France.
McKenney, Karl Cushing,	'12	Oct.	30, 1918	Capt. C. A. C. A. E. F. Died of bronco-pneumonia, overseas.
Ervay, Ervay Bronaugh,	'16	Nov.	1, 1918	2d Lt. 21st Inf. Died in Washington, D. C. of influenza while on special duty.
*Handy, William R., S. A. T. C.,	'20	Nov.	1, 1918	S. A. T. C. at M. I. T. Died of pneumonia.
Atkinson, Henry M., Jr.,	'17	Nov.	2, 1918	Capt. A Brty. 71st Art. C. A. C. Died of pneumonia at Angers, France.
Chidsey, Halmer C.,	'20	Nov.	3, 1918	Candidate, C. A. C. Sch. Fort Monroe, Va. Died of pneumonia.
Paine, Albert I., S. A. T. C.,	'22	Nov.	3, 1918	S. A. T. C. at M. I. T. Died of pneumonia.
Chadwick, James B., Jr.,	'14	Nov.	4, 1918	1st Lt. 337th Tank Corps. Died of pneumonia while sailing for Europe.
Greene, John B., S. A. T. C.,	'22	Nov.	4, 1918	S. A. T. C. at M. I. T. Died of pneumonia.
*Dollbaum, M. P., S. A. T. C.,	'21	Nov.	7, 1918	S. A. T. C. at M. I. T. Died of pneumonia.
Homer, Joseph Warren, Jr.,	'19	Nov.	9, 1918	Ensign, U. S. N. R. F. C. Died of pneumonia in London.
Honeyman, Bruce R.,	'06	Nov.	9, 1918	Capt. A Co., 313th Engrs. Died of disease, A. E. F.

*Died while awaiting induction.

Bascom, Edgar D.,	'15	Nov.,	1918	2d Lt. B Co., 101st Engrs. A. E. F. Killed in action.
Griffin, Ronald B., S. A. T. C.,	'21	Nov.	14, 1918	S. A. T. C., M. I. T. Died of pneumonia.
Tutein, Chester R.,	'18	Nov.	17, 1918	Aviation. Killed in aeroplane accident in France.
Cook, H. M., Jr., S. N. T. C.,	'22	Dec.	17, 1918	S. N. T. C. at M. I. T. Died of pneumonia.
Curry, Donald, S. N. T. C.,	'21	Dec.	17, 1918	S. N. T. C. at M. I. T. Died of bronchial pneumonia.
Jones, Granville R.,	'07	Dec.	22, 1918	Capt. Sanitary Engr. Died of pneumonia at Columbus, Ga.

DECORATED FOR BRAVERY

Men who have won medals for bravery, or otherwise cited
January 15, 1919

Angell, C. M.,	'18	1st Lt. Air Service	Received Croix de Guerre. Killed in fall of plane, May 14, 1918.
Belcher, Donald,	'16	Driver Am.	Won Croix de Guerre.
Bigelow, Edmund C. S.,	'20	Red Cross	Received Croix de Guerre, May 31, 1918.
Brooks, Arthur Raymond	'17	2d Lt. Air Service.	Awarded the Distinguished Service Cross by General Pershing for gallantry in an air battle, September 14, 1918.
Collins, Arthur Edgar G.,	'14	Lt. Royal Engrs. B. E. F.	Recommended for Military Cross, for bravery near Havrincourt, Nov. 30, 1917.
Derby, Henry S.,	'19	Corp. 101st F. A.	Cited by General Edwards for bravery and especially meritorious service in action against the enemy in May, 1918.
Emerson, W. K. B., Jr.,	'20	2d Lt. F. A.	Formerly in the Ambulance Service. Received French War Cross, January, 1918. Killed in airplane accident, May 14, 1918, in France while serving as an artillery observer with a French Escadrille.
Fallon, Nugent,	'06	Lt. U. S. N. R. F. C.	Recommended for the Distinguished Service Cross for gallantry in assisting a wounded companion to land safely, by the British Govt. on March 12, 1918.
Feland, Logan,	'92	Lt.-Col. Marine Cps.	Awarded the Distinguished Service Cross for gallantry at Bois de Belleau, June, 1918.
Gunn, Selskar M.,	'05	Capt. Red Cross	Made a Knight of the Legion of Honor, January 2, 1919.

JOHNSTON, NORWOOD P.,	'19	Ambulance Service	Awarded the Croix de Guerre in 1917. Now in School of Military Aeronautics, Cornell Univ., Ithaca, N. Y.
KENNEY, GEORGE C.,	'11	1st Lt. Air Service	Decorated for heroism in action near Jametz, France, October 9, 1918.
KINGSBURY, CHESTER L.,	'18	Corp. 101st Engrs.	Won Croix de Guerre, March, 1918, for bravery in action.
LEAVELL, JOHN H.,	'07	Capt. 316th Engrs.	Received the Distinguished Service Cross for extraordinary heroism at Audenarde, Belgium, Nov. 1, 1918.
LOWELL, GUY,	'94	Major Red Cross	Italian Commission, Received Italian Military Medal, March, 1918. "Officer of the Crown of Italy."
MACKAY, GEORGE LEWIS,	'14	Major Engr. Senior Grade Engrs.	Received Croix de Guerre. Missing in action April 17, 1918, while blowing up an enemy trench.
MACKENZIE, JOHN D.,	'11	Lt. 185th Cape Breton Highlanders B. E. F.	Awarded the Military Cross for "Gallantry. Lead 'D' Co. after its C. O. had become a casualty at Amiens" August, 1918.
MACLEOD, NORMAN D.,	'14	Major F. A.	Awarded Distinguished Service Cross for extraordinary heroism in action at Marcheville, France, Sept. 26 '18.
MCRAE, DONALD M.,	'16	Major 79th Inf.	Awarded French Legion of Honor Cross and was recommended five times for the British Military Cross, which he received in London while recovering from a hand-grenade wound.
MENDENHALL, FRED D.,	'14	1st Lt. 7th Engrs.	Awarded the Distinguished Service Cross for extraordinary heroism near Cunel, France, October, 1918.
MURPHY, WILLIAM H.,	'12	2d Lt. 104th Inf.	Received Croix de Guerre in March, 1918.
PAGE, KENNETH B.,	'20	Pvt. Med. Cps.	Won Croix de Guerre, March, 1918. Received Distinguished Service Cross in July, 1918.

Payne, Karl C.,	'19	Lt. Air Service	Reported missing in action. Nov. 5, 1918. Given the Distinguished Service Cross for exceptional daring and bravery in action on Sept. 16, 1918. Was a prisoner at Karlsruhe, from which he escaped.
Poland, W. B.,	'90	Belgian Relief	Received Cross of Legion of Honor from the President of France.
Rideout, Percy A.,	'11	2d Lt. Engrs.	Killed in action. Awarded the Distinguished Service Cross for extraordinary bravery in action at Clerges, France, October 4, 1918.
Sprague, William G.,	'16	Ensign U. S. N. R. F. C.	Won Croix de Guerre which was presented at his grave. Killed in a landing accident after attacking an enemy submarine off Ile Tudy, Finistere, Oct. 26, 1918.
Stewart, Alan E.,	'14	Capt. Canadian Art. B. E. F.	Received Military Cross.
Stuart, Kimberly,	'19	Ensign U. S. N. R. F. C. March, 1917.	Ambulance Service when received Croix de Guerre. Now with U. S. Naval Aviation, Foreign Service.
Taylor, Paul H.,	'14	1st Lt. Ord. Dept.	His work in Mobile Repair Dept. has won high official praise for executive work, Sept., 1918.
Tyler, John C.,	'17	1st Lt. Air Service	Received certificate of citation for courageousness in downing enemy plane. Either missing or killed in action. No further confirmation as yet.
Wallis, James E., Jr.,	'17	Capt. Air Service	Received Distinguished Service Cross for exceptional bravery in region of Metz, Sept. 13, 1918.
Warner, Donald D.,	'18	1st Lt. Air Service	Awarded the Distinguished Service Cross, Oct. 29, 1918. Wounded in action.
Whelton, Francis R.,	'21	2d Lt. Infantry	Won Croix de Guerre for bravery in action, July 7, 1918.

WHITE, JAMES M.,	'14	Lt. Ambulance	Won Croix de Guerre. Now with 116th Engrs. A. E. F.
WINSLOW, C. E. A.,	'98	Major Red Cross	Commission to Russia. Received medal for distinguished public service, January, 1918. Returned home.
WOOTEN, JAMES C.,	'18	2d Lt. Air Service	Received the Cross of the Legion of Honor. Killed in action, August 3, 1918.

These lists are made up from such data as is available, but if any readers have information which will add to or correct our records, will they please send it to Mrs. George at the Rogers Building, Boston.

JAMES PHINNEY MUNROE

By George Perry Morris

(Reprinted from the "Journal of Education," December, 1918)

WHEN, in 1882, Mr. Munroe, at the age of twenty, graduated from the Massachusetts Institute of Technology, Boston, he did not even imagine that in 1918 he would be a resident of Washington in a post of high importance in education and civics. He had been born and brought up in historic Lexington, where his family had been as prominently identified with the community as the Adams's with the town of Quincy. Traditions of the Revolutionary War were part of his education, for was not he a neighbor of the renowned Munroe's Tavern, and did not he live in a "house by the side of the road" along which the British marched out to Concord and along which they returned beaten? However, it was not past or coming wars or hopes of public office that the young Tech graduate then thought about. He had won a technical training that he knew would prove and has since proved useful to him as a successful manufacturer and business man, and what the newer and less traditional form of education had done for him he wished to make accessible to other youth. Hence, followed a chapter of personal devotion and official responsibility to the Institute of Technology quite extraordinary when its length and the variety of its forms are considered. He was secretary of the Faculty for seven years. He edited the school's monthly journal for nine years. Thrice was he chosen president of the Alumni Association. In 1897 he was added to the Corporation which governs the institution, and he has been its secretary since 1909. He has seen Presidents Walker and Pritchett go and Presidents Pritchett and Maclaurin come upon the scene. Few if any men knew as well as he the history of the evolution of the great school that now adorns the banks of the Charles and that rivals Harvard University as one of the sights of Cambridge—an institution that since the war began has been as much of a national institution as West Point or Annapolis, and that, formally and informally, openly and secretly, has done much to match Uncle Sam against Germany's combination of militarism and applied science.

Mr. Munroe early in his career disclosed yet another side of his character that now is getting fullest expression. Lexington has civic as well as military traditions. Its old families have worked the town meeting form of democracy for generations. The men it rears go forth trained to do things politically and as live units in a democracy. Consequently, you find that this Lexington man has served on the town school committee, that he has been chairman of the State Commission for the Blind, that he has shared conspicuously in planning for and carrying out civic uplift plans in Boston, and that he has been an adviser and worker in many of its important civic agencies, like the Chamber of Commerce and the City Club.

Here the story might close, if it were all, and the record would be such as most men would envy. But it is not all. Years ago Mr. Munroe became the propagandist for a more utilitarian, democratic and, as he believed, imperatively needed form of education than was being given in American educational institutions, of whatever grade and whether for lads or girls, men or women. For years he was, and still is for that matter, the key personality around which a group of educators of Greater Boston gathered under the name of the Social Education Society. He instanter came to the aid of the North Bennet Street Industrial School in Boston, when, under the patronage of Mrs. Quincy Shaw, of ever redolent memory, it began to show local educators and visitors from afar what could be done for youth of a congested and immigrant settled area by a form of education that developed the creative powers of the pupil. Quite inevitably he became the president of the National Society for the Promotion of Industrial Education when it was formed in 1910; for his writings and his speeches had given him a national reputation as a reasoned and persuasive champion of vocational education, and his experience in business life and in academic administration insured against any doctrinaire use of high office for ends that might seem desirable but at the same time be inexpedient.

The next important chapter in Mr. Munroe's career opened when the national demand began to come for a type of education such as he had been calling for insistently. He saw to it that Congress did not lack for facts and for arguments that he had accumulated, and when at last the nation was committed by Congress and the President to federal expenditure for co-operative action with the states in giving vocational education, he no doubt was one of the happiest men in the country. What the conservative New England of his birth still looked upon with skepticism he had found supported by men of the south and of the west as well as those of the interior.

But some one had to execute the new law, lay the foundations broad and deep and wisely for using national funds in unprecedented ways to create a more efficiently educated and more adequately equipped population of producers. No one realized this more than the Boston manufacturer, who also early had elected to be an educational pioneer; and hence when, as a representative of the business men of the country, he was nominated to be a member of the Federal Board of Education, he accepted, and forsook Boston for a time and came to Washington to serve the nation. Where he works it is sometimes difficult to say, so often have war conditions and expanding functions of the boards forced movings from place to place. But you can catch him at the renowned Cosmos Club if you are canny. Since the war opened a work of vast importance, namely, the rehabilitation and re-education work among soldiers and sailors mutilated in any way, at home and abroad, has been added to the educational service of the Vocational Board, of which Mr. Munroe is now the vice-chairman and the responsible working head. One cannot watch him quietly going about his present task and sharing in the vast war for a new sort of world with its notions of education much transformed (and along lines harmonizing with the ideas and ideals steadfastly championed by him) without thinking anew of the saying that "America spells opportunity." There was a time, not so many years ago either, when he would have died happy if he could have got New England to doing what the republic and the nations are now being forced to do. He must occasionally let his well known powers as a wit and ironist play privately, if not publicly, around the heads of persons who once smiled upon him with the contempt of the classicist for the modernist

SAMUEL MORSE FELTON

Who at the head of 12,000 railroad engineers reorganized the shattered railroad systems of France

WHEN war was declared on Germany it was understood, of course, that American troops would be sent to France. Once in France, they would have to be armed, fed and clothed by their own Government. At that time the French railroads were in poor condition. Tracks were badly worn, locomotives needed repairs, cars were fast going to pieces. Three years of war, with nearly every man on the battle line, had almost broken down France's transportation facilities.

While volunteers were being enlisted and trained in this country, preparations were rapidly made to put the railroads of France on a sound operating basis. The Government asked Samuel Morse Felton to organize and equip a large body of men for that purpose. Mr. Felton had done similar work for the American army early in the troubles with Mexico. Pershing, waiting on the Texan frontier for orders to cross the Rio Grande and move southward, had scores of locomotives and hundreds of cars ready for his troops.

The engines and cars had been mobilized by Mr. Felton, who had also concentrated along the Mexican border huge supplies of ties, rails and bridge material. Men to run the trains carrying soldiers and to rebuild the railroads and bridges had been organized under Mr. Felton's direction. The invasion did not occur, but the machinery for it was ready. His brilliant work in Texas caused the selection of Mr. Felton for the greater work to be done in France.

It might almost be said that Mr. Felton was brought up behind a locomotive. His father, also Samuel Morse Felton, a Harvard man and a civil engineer by profession, was superintendent of the Fitchburg railroad in 1843—which was ten years before the son was born. It was he who planned and directed the secret passage of Abraham Lincoln from Harrisburg to Washington in 1861, being at the time president of the Wilmington & Baltimore railroad.

The son, having graduated from the Massachusetts Institute of Technology with the class of 1873, was a railroad rodman at the age of twenty-five. In the years that followed he served many transportation companies and became famous as the physician of those that were ailing and had been given up by other good doctors.

"I have been called in to a number of pretty hard cases," he once remarked to the writer of this article.

The fine work that he did in Mexico, during the days of President Diaz, caused J. P. Morgan, the elder, to place him in charge of the debilitated Chicago Great Western, which line he soon had sitting up in bed and cheerfully and hopefully conversing.

He has treated the Pan Handle, the Boston & Maine, the Erie and the Alton, besides a score of smaller corporations. Often he diagnosticates two or three cases while treating the one whose life he is saving. Other doctors, on such occasions, follow his directions and administer his medicines.

Mr. Felton was president of the Chicago Great Western when asked to organize a force for the rehabilitation of the railroads in France. He had, in his plans for Pershing's invasion of Mexico, obtained the names and locations of thousands of locomotive engineers, firemen, conductors, brakemen, track workers, machinists, bridge builders, telegraph operators, station agents and bookkeepers.

Five construction regiments were soon organized. Two more have since been recruited. These regiments were sent to France that the railroads there might be ready for the coming of the United States army. New rails were put down and bridges were repaired. The colonel of each regiment was an engineer officer from the army.

Lieutenant colonels of the five regiments had been chief engineers of large American railroads; captains, thirty of them, had been engineers of maintenance of way; lieutenants had been supervisors or road-masters and the sergeants and corporals had been track and bridge foremen, while the privates were experienced track laborers.

Shop and operating regiments also were organized. These were composed of trained men. The officers had been general managers, division superintendents, trainmasters, master mechanics, chief dispatcher and so on of railroads in this country.

The makeup of each company in the operating regiments included twelve locomotive engineers, sixteen brakemen, eight conductors, eight switchmen, twelve telegraph operators, three clerks and stenographers, seven signal maintainers, twelve car inspectors and repairers, fourteen track foremen, as well as draftsmen, surveyors, storekeepers, cooks, pipe-fitters, yard foremen, machinists, blacksmiths, boilermakers, carpenters and wagoners.

It was Mr. Felton's theory—and he carried it out in every particular—that the men he organized and sent to France should be competent to operate and maintain the railroads of that country, from the laying of track and the building of bridges to the running of trains and the transportation on time of troops, weapons, shells and food.

If a locomotive leaks or collapses, Mr. Felton's experts can repair it. His mechanics are competent to take over any railroad machine shop in Europe and conduct it efficiently. The best conductors and engineers are running troop, food and munition trains.

Altogether there are thirty-eight regiments and battalions of standard-gauge American railroad men in the army. There are also men to operate and maintain the narrow-gauge track—hundreds of miles of it—that goes almost into the trenches themselves, over which shells and so forth are carried.

In the autumn of 1863 Confederate soldiers destroyed a bridge over the Rappahannock and twenty-two miles of railroad between Bull Run and Brandy Station. Federal engineers rebuilt the bridge, which was six hundred and twenty-five feet long and thirty-five feet high in nineteen working hours.

General Black's engineers are prepared to duplicate that achievement, and in an area under shell fire, if necessary. And Mr. Felton's force, classed as engineers in the military service, would have loaded trains waiting on the banks to go over.

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NEWS FROM THE TECH BUREAU

Interesting facts about the Alumni "Over There"

George C. Gibbs, '00, has just sent in the information available at the Technology Bureau in Paris up to December 11. This includes the lists of the men in the Paris hospitals, those decorated and promoted, those present at the Technology dinners and the University Union.

Lieut. Herbert W. Barrett, '18, is still in Hospital No. 3, American Red Cross, Paris. He is recovering from a wound in the leg. He expects to leave the hospital soon.

Last word received from James Sidney Marine, '17, and Donald D. Warner, '18, was that they were waiting in hospitals to be sent to the States. We understand both are doing very well.

Sergt. Robert W. Scott, '20, came back from the hospital several weeks ago, recovering from a wound in the arm.

Lieut. Richard B. Catton, '13, is still in Hospital No. 3, Paris. He has been suffering with mastoiditis; he is somewhat better.

Lieut. Dudley Bell, '17, was in town for a few days, having entirely recovered from his wounds. He left Paris, returning to the States.

Recently Lieut. Arthur R. Brooks, '17, and Capt. James E. Wallis, '17, were decorated with the D. S. C. by General Pershing.

On November 2 one of our regular monthly Tech dinners was held at the University Union. There were no speakers at that dinner. The following men were present: Herbert Wellcome, '18; George C. Gibbs, '00; E. E. Dawson, Jr., '14; John R. Parker, '18; Tenney L. Davis, '13; Guy Hill, '06; E. C. Lowe, '05; Donald E. Woodbridge, '16; R. B. Haynes, '13; William W. Dodge, Jr., '16; Paul H. Buxton, '16; Lucas E. Schoonmaker, '17; Douglas H. McMurtrie, '15; William A. Hall, '88; Albert W. Buck, '13.

Plans were made at that time for an informal Christmas dinner which was held on December 21.

On November 11, the day the armistice was signed, a number of Technology men were in Paris, and there was a small Technology push which enjoyed the festivities of the day, and also were the guests of Charles W. Eaton, for lunch and dinner. Among those present were Charles W. Eaton, '85; George C. Gibbs, '00; Robert M. Allen, '16; Elbert D. Green, '10; Douglas R. Buchanan, '18; Donald DesGranges, '14; Henry Miller Blank, '18. Since the armistice was signed, it seems that there have been more Technology men visiting the Bureau than any time in its history. This is accounted for by the fact that many men are going to Nice on permission and also stopping in Paris before leaving for the States.

The Bureau is always crowded and there are always more applicants for rooms at the Union than it can accommodate, and the Technology Bureau is supplying extra beds for those who cannot find any place to stay. The supplies from the War Service Auxiliary are very much in demand. A splendid supply has been received and the men find them very desirable and there is a continued call for these supplies.

We had a little Christmas party on December 21 for the Technology men who could get to Paris. There was an informal open house at 5 P.M., with an old-fashioned Christmas dinner at 7 P.M. A great many availed themselves of the opportunity.

"TECH SHOW"

A Regular and (Irregular) A. E. F. Tech Christmas Party

CAFE CARDINAL

Corner Boulevard des Italiens and Rue de Richelieu

"OPEN HOUSE"
at 5 P. M.

Saturday, December 21st

Old Fashioned Christmas Dinner
at 7 P. M.

"ON DIT":

There will be a Real Egg Nogg
Also - Turkey, and Plum Pudding
Also - A little Jazz Music

Next to Going Home, come and enjoy the Christmas Party with those who cannot

15 Frs FOR DINNER

IF POSSIBLE NOTIFY :

GIBBS, TECHNOLOGY BUREAU
American University Union 8, Rue de Richelieu, PARIS

On December 5 one of our regular monthly dinners was held at the University Union; twenty-seven men were present, and half a dozen other men came in during the dinner. Many of the men were at the dinner for the first time and all enjoyed themselves very much. The following men were present: Richard O. Lowengard, '17; James E. Wallis, '17; Mark C. Kinney, '11; Donald C. Barton, '11; Dugald C. Jackson (Faculty), Almerin M. Gowing, '15; Herbert W. Barrett, '19; E. C. Lowe, '05; A. S. True, '14; Dugald C. Jackson, Jr., '19; R. S. Rowlett, '16; George S. Stevens, '14; Edward L. Moreland, '07; James W. Doon, '17; Dudley E. Bell, '17; Paul H. Buxton, '16; William W. Dodge, '16; C. P. Kerr, '11; Douglas R. Buchanan, '18; Alexander G. MacAlister, '18; John H. Babbitt, '17; O. S. True, '20; J. C. Bollenbacher, '09; H. H. Burkhardt, '16; Charles W. Loomis, '16; Edward H. Sargent, '07.

At this dinner all the men were presented with a very attractive brass briquet or a cigarette lighter which is a present this year from the Technology Bureau to all the men who are in France in the A. E. F.

Capt. W. P. Watson, '14, has been promoted to the rank of major.—Capt. N. D. MacLeod, '14, has been promoted to the rank of major.—Capt. J. R. Ramsbottom, '17, has been promoted to the rank of major.—Lieut. Eugene L. MacDonald, '13, has been promoted to the rank of captain.—Lieut. Charles J. Davis, Jr., '16, has been promoted to the rank of captain.— Lieut. R. W. Logan, '17, has been promoted to the rank of captain.—2d Lieut. Donald R. Dixon, '14, has been promoted to 1st lieutenant.—2d Lieut. W. W. Eaton, '17, has been promoted to 1st lieutenant. —2d Lieut. Arthur R. Brooks, '17, has been promoted to 1st lieutenant.—Sergt. Joseph L. Brodil, '16, has been promoted to 2d lieutenant.—Frederick B. Barns, '15, has been promoted to 2d lieutenant.—Sergt. Lawrence L. Travis, '15, has been promoted to 2d lieutenant.—Charles Rogers Lord '16, has been promoted to 2d lieutenant.

MERCHANT MARINE SCHOOLS TO CONTINUE

Henry Howard '89 in charge

Although the aviation schools at Technology either have closed, or will close in the near future, the schools for training men for the merchant marine will remain open at least until the first of March. The deck officers' school is in charge of Dean Burton, who is also supervisor of instruction of all the schools of this sort throughout the country, while the engineers' school is under the charge of Professor Edward Miller. The recruiting for the merchant marine is under the charge of Henry Howard, '98. The continuance of these schools is made imperative by the decision of the Shipping Board to man all merchant ships with merchant mariners and not with naval men.

"The Merchant Mariner" tells of this decision as follows: "Naval manning of new cargo ships, which grew out of war necessities, is in principle a thing of the past, the United States Shipping Board has officially announced. In an important statement dealing with the future policy of the board under this head, issued for publication on December 17, these points were made clear: That all merchant ships hereafter coming out will be given merchant crews, that this change is due to the discontinuance of naval regulation of the movements of merchant shipping, resulting from the return of peace conditions at sea. The board's announcement clears up some obscurities that have existed of late in the public mind as to who was to man the new Merchant Marine."

UNDERGRADUATE ACTIVITIES

Homer V. Howes

Technology undergraduates have had their taste of army life. Although they have not fought and bled, they have passed through a stormy siege of studying and working under very difficult circumstances, and most of them have survived.

There were two opinions of the S. A. T. C. experiment among the undergraduates, the first of which openly criticized every feature. The time allowed for preparation was too short; the military duties always interfered with the academic (in fact, the Faculty would probably declare war upon the Commandant); the study rooms were close, and entirely incompatible with concentration upon dry technical subjects; even the food was poor; and at night the call of the sentries every half hour kept a man awake, while the moon shone in his face through the uncurtained windows between the calls.

The other, and less popular, opinion was that the scheme was feasible. The students could do their work if they set their minds to it, and really tried to make the best of a difficult situation; the military duties, while stringent, did not take any more time than was usually wasted by the students in normal times; the study rooms were admittedly unfavorable, but not entirely impossible for good work; while the food and sleeping quarters might have been a whole lot worse.

The former of these two opinions was expressed by far the greater number of men, and with such spirit, the S. A. T. C. will go down in the annals of undergraduate life as a dismal failure.

Despite the overworked condition of the students, activities were not entirely buried. This was especially true among the members of the naval unit. A football team was formed by the sailors which put up a very scrappy fight in the three games which it played, although only one, that with New Hampshire State College, resulted in a victory. Exeter, and the Young Men's Christian Association training college at Springfield both downed the Technology men, but only by small margins.

The naval unit also formed an orchestra, and later used this orchestra in a minstrel show, at which cider, smokes, aud vaudeville acts were served, one feature sandwiched between another.

The army branch was not nearly so active, and the best it could do was to stage one dance just before disbanding.

There were two bright events, however, during the three months of army life which showed that down deep the old Technology spirit was still burning. The first of these was the convocation called by the Young Men's Christian Association in order to raise funds for the United War Workers' Drive. The men gathered in the hall immediately after mess, and led by Song Leader Netzer, they soon worked themselves into a very generous and open-pocketed condition. Mr. Brewer Eddy gave one of his remarkably vivid speeches, telling of the work and suffering of the boys "over there," and then the call was made for pledges. One company strove to outpledge the other with the result that over $18,600 was contributed. Company K, of the army, nosed ahead with $2004, with H a close second, subscribing $2000, both companies averaging $20 a head.

The other bright event was the all-Technology smoker which was attended by over 1600 students. Dr. Maclaurin first addressed the crowd, and told the men that the experience in the S. A. T. C. would never be regretted. He then gave out

the Cabot medals for best physical development the year before, and introduced A. L. Bemis, '93, who gave out the much talked of prizes for the best reports on summer work in the shipyards. Dean Burton and Coach Kanaly followed with speeches. Song Leader Beaugart of the U. S. S. "Pennsylvania," then led the men in popular songs followed by "Take Me Back to Tech," and "The Stein Song." Cider, doughnuts and ice cream were served.

The spirit aroused at this smoker, remained with the students until they were disbanded, and they went on their Christmas vacation with the feeling that Tech might not be such a bad place to attend this term after all.

DEMOBILIZING OUR TEMPORARY BUILDINGS

What to do with all the Institute's war-time structures

As soon as it became evident that the S. A. T. C. and the Naval Aviation Units were to be demobilized at Technology, as soon as was physically possible after peace was declared, the pressing question arose of what was to be done with the buildings that had been erected for the S. A. T. C., on some of which the paint was hardly dry. The problem is now being solved. The receiving ship of the Naval Aviation detachment, known in civil circles as the Tech Block, has been vacated. The Institute is at work converting the rooms back into bowling alleys and billiard halls and is selling the furnishings of the shower baths and canteen. By the end of January the Walker Memorial will be vacated by the existing flights of the detachment and will be fitted at once with the gymnasium and room furnishings that will make it what it was built for, the all-Technology clubhouse. The many wooden buildings will probably be for sale as old lumber. The army airdrome is to be fitted at once for the purpose for which it was really erected, namely, an aerodynamic laboratory. The big wind tunnel is already installed here and other apparatus will be added to complete the equipment. The kitchen and mess hall, in which one thousand can sit at meals together, will be retained, and will be used for the cafeteria, those desiring more substantial food being able to find it in the grill room at the Walker Memorial. There are fifteen to twenty other wooden structures, the navy clubhouse, navy administration, navy dispensary and hospital, with engine sheds, observation lofts and the like, together with the new barracks, which have not as yet been completely filled. The Young Men's Christian Association hut on the site of the future Pratt School of Naval Architecture, will probably remain devoted to its present uses for a time, while the Technology writing room, in the little activities building on Massachusetts Avenue, which has proved a quiet place for correspondence, will probably be retained. In the interior of the Institute buildings numerous partitions, galleries and other special constructions are already being displaced.

When the S. N. T. C. demobilizes there will be returned to the department of civil engineering its library, museum and drawing rooms that have been used by the army and lately the navy for dormitories and offices.

SELSKAR GUNN, '04 DECORATED

Professor Selskar Gunn, '04, of the Department of Biology at Technology has been made Chevalier of the Legion of Honor by the French Republic.

Selskar Michael Gunn, who left this country in 1917 with the Rockefeller Foundation Unit, as associate member of the Commission for the Prevention of Tuberculosis in France, and who has been made a knight of the Legion of Honor, was born in London, England, May 23, 1883, and was graduated from the Kensington Park College in 1900.

Following his graduation he sailed to America and took up his studies at the Massachusetts Institute of Technology, from where he was graduated with the degree of S. B. in 1905. Since that time he has served as health officer for the State Board of Health in this Commonwealth and is the author of many papers and books pertaining to hygiene.

During 1905-1906 he was bacteriologist at the Boston Biochemical laboratory, and during the next three years was first assistant bacteriologist of the State Board of Health in Iowa. During his stay in that state he also lectured on hygiene in the University of Iowa. He then moved to Orange, N. J., where he served as health officer, and met his future wife, Miss Clara J. Coffin.

After marrying in 1911, he was associated with several Massachusetts universities, health papers and the State Board of Health. As assistant professor of sanitary biology and public health, he served at Technology and was made associate professor in 1914. During 1912 and 1914 he was assistant professor of biology at Simmons College and served as secretary of the American Public Health Association. He also was managing editor of the American Journal of Public Health during 1912-1914 and in the latter year became editor. He filled this position until he left for France.

All during his career in this country, he was active in promoting the good health of the people and served on many important delegations at various conventions of health officers. He served as assistant secretary-general of the fifteenth international congress on hygiene and demography, which was held in Washington, D. C., in 1912. He also was a member of the American Statics Association, New England Water Works Association, American Association of Labor and the Society of American Bacteriologists.

TO REBUILD FRANCE AND BELGIUM

Swain, '77 and Main, '76, go across on important errand

THE French government has invited the engineering societies of the United States to send delegates to France to aid in restoring devastated regions there and possibly in Belgium.

As a result of this invitation four engineering societies are to send representatives to advise with the French engineers in the great problems of reconstruction. Needless to say the men to go will be some of the best known in the United States.

The American Society of Civil Engineers is to send six representatives; there will be one each from the society of Mechanical Engineers, the American Institute of Electrical Engineers and the American Society of Mining Engineers.

At least two of the men to go are from Boston. They are Prof. George F. Swain and Charles T. Main, a mill engineer of national reputation. The party of engineers will sail from New York on the steamship "Espagne" on December 5th.

So far as the Boston men are aware it is planned to have the American engineers visit the devasted regions and then confer with the French engineers as to what is best in the plans for the restoration of the war-torn territory. The party expects to be gone for about six weeks, but may remain longer.

CHARLES THOMAS MAIN is a resident of Winchester, with business offices at 201 Devonshire Street, Boston. He was born in Marblehead, February 16, 1856, son of Thomas and Cordelia (Reed) Main. He was graduated from Technology in 1876 and was an assistant instructor there until 1879, when he became connected with the Manchester Mills, of which he soon became superintendent and engineer. For a time he was also with the Pacific Mills and later took up private engineering practice, designing many important industrial plants.

He is a trustee of many widely known organizations, a member of the corporation of Technology, member of the American Society of Mechanical Engineers, American Society of Civil Engineers, Boston Society of Civil Engineers, National Association of Cotton Manufacturers and New England Water Works Association. He is a member of the Exchange, Engineers', Technology Clubs and of the Engineers' Club of New York.

PROFESSOR GEORGE FILLMORE SWAIN was born in San Francisco, March 2, 1857, son of Robert Bunker and Clara Ann (Fillmore) Swain. He received his degree of B.S. from the institute in 1877; studied at the Royal Polytechnic School in Berlin, 1877–80, and secured the degree LL.D. from the University of New York in 1907.

He was employed as hydraulic expert by the 10th United States Census; was Hayward professor at M. I. T., 1887–09; and professor of civil engineering and applied science at Harvard University since September 1, 1909.

He has been consulting engineer of the Massachusetts Railroad Commission and was chairman of that commission. He served with the Boston Transit Commission as well as on a number of other commissions, and has been the engineer for many important structures.

Professor Swain is a fellow of the American Academy of Arts and Sciences, president of the American Society of Civil Engineers, member of American Society

of Mechanical Engineers, American Institute of Consulting Engineers, Boston Society of Civil Engineers, of which he has been president; Institute of Civil Engineers of Great Britain, American Railway Engineering Association, Association of Superintendents of Bridges and Buildings, New England Water Works Association, New England Railroad Club, American Forestry Association, Society for the Promotion of Engineering Education and the American Society for Testing Materials.

AT BIRTHPLACE OF LA FAYETTE

M. I. T. workroom asks fund to aid refugees gathered there

As special permission has recently been granted by the French High Commission to the Workroom of the M. I. T. War Service Auxiliary to send new garments for French refugees to the Chateau La Fayette at Chavaniac (Haute Loire), a most urgent appeal is made by the Workroom Committee, of which Mrs. Edward Cunningham is chairman and Mrs. W. T. Sedgwick director, for funds for the purchase of materials.

This chateau is the birthplace of La Fayette and has been bought with American money on behalf of the French Heroes' La Fayette Memorial Fund, to become after the peace a permanent pilgrimage-museum similar to Mount Vernon. At present it is a home for refugee children under the care of Madame Charles Le Verrier of Paris and Miss Clara Greenleaf Perry of Boston, both known to many Bostonians.

The ladies of the Technology Workroom will gladly give time and energy to the making of such garments as are needed, but they have no money for materials, except an emergency donation of $500 from Mrs. Everett Morss. Hence, this special appeal is made for funds. Checks sent to Mrs. Robert P. Bigelow (Caroline C. Bigelow) will be duly acknowledged. Gifts received in response to a previous appeal for materials for garments for the hospitals of the Allies are gratefully acknowledged.

SOPHOMORES MUST DRILL

Military training made compulsory for two years — Junior Freshmen begin

Drill at the Institute will be compulsory for two years, whether the men expressed the desire to join the R. O. T. C. or not. The sophomores, freshmen and junior freshmen will drill as separate units, and the last two named will drill together on Saturdays. The junior freshmen began yesterday, under Colonel Hamilton, who will be connected with them alone. He said that probably two companies of them would be formed.

It is not known as yet when the sophomores and freshmen will start drilling but it will probably not be for another week. As contemplated, the R. O. T. C. will take four years, with probably a commission in the reserves at the end of that period. This will not interfere with the compulsory drill, however. The men who said that they wished to join the R. O. T. C. at the time of registration will probably be able to change their desire, if they so wish.

THE BEMIS SHIPYARD PRIZES AWARDED

Announcement made at big S. A. T. C. smoker

A COLLEGE spirit that has not been in evidence at Technology since the United States entered the war pervaded the large mess hall of the S. A. T. C. on November 29, at the largest " smoker " ever held at the Institute. It was an initial and probably final mass gathering of the Technology S. A. T. C., who, with the general student body present, numbered over 1700.

The gathering was for the purpose of instilling college spirit and beginning a " reconstruction " of college life lost to the student body with the introduction of the S. A. T. C. and its consequential military atmosphere.

President Richard C. Maclaurin, for the second time since being president of Technology, appeared before an undergraduate body. In his brief talk he congratulated the members of the S. A. T. C. in volunteering their services at a time they seemed to be much needed.

" I hope you have enjoyed the last few weeks in the S. A. T. C. more than you did the first few weeks," said Dr. Maclaurin. " On the whole it was a good experience On the whole you did the right thing in volunteering your services. That is something you will always cherish when you can look back upon it. The S. A. T. C. is about to be demobilized. In a few weeks Technology and other colleges will return to normal academic life.

" I want to take this opportunity to speak of the college life. In any college everything depends upon the spirit that pervades the place. This warlike experience has cut the colleges asunder. There is now opportunity for every one to join in dispelling the unpleasantness that the students have been experiencing because of the military life."

At the close of his talk Dr. Maclaurin awarded the Cabot medals to the students having shown the greatest physical development. The first prize was awarded to Lawrence Harold Banks, the second to Harold Frederick Stowe, the third to Z. Giddons, Jr., the fourth to Richard Wellington Smith, and the fifth to Julius Gordon.

Dr. Maclaurin then introduced Alfred T. Bemis, '93, of the Bemis Paper Box Company, who offered three groups of prizes to Technology students in connection with the ship building work during the summer months. The first group of prizes were for the best stories on shipyard experiences, considered from the technical standpoint; the second group for the best suggestions for co-operation between the Institute and the shipyards; and the third for the best work accomplished in the shipyards.

After explaining the object of offering these prizes, Mr. Bemis announced the winners. In the first group the first prize was won by George A. Wilson, the second by Leland W. Gilliatt, the third by Harold F. Stowe, the fourth by George F. Devere and the fifth by James P. Ford. In the second group only two prizes were awarded. The first prize was won by George F. Gokey and the second prize by Leland W. Gilliatt. In the third group the winners were: First prize, Carl W. Phelps; second prize, Henry F. Levy; third prize, Leland W. Gilliatt; fourth prize, Harold T. Dennison; fifth prize, F. J. Byrne, Jr., and sixth prize, George E. Rowe.

Dean A. E. Burton, who spoke next, said that the " smoker " was more like Technology than anything he had witnessed for some time. " How fortunate you are over all Technology men in the opportunities you have had," said Dean Burton

" The benefit you have received through the S. A. T. C. is one of the things you are lucky to have. That will come to you perhaps ten years from now. It will come to you at your reunions."

The dean spoke of the wonderful opportunities the men had in working in the shipyards with the regular working men. He said that it gave them the workingman's viewpoint, which was such an advantage to an engineer.

" It is not going to be all pleasure getting out of the S. A. T. C.," said Dean Burton." " We've got the same old Faculty, and while they are going to be just and kind to you, the Institute is going to be just as hard to get through as it used to be."

The dean emphasized the fact that with the discontinuance of the military routine students would again be left to self-discipline. He encouraged the students to enter into athletics and other college life activities, but not to indulge in them to the extent of failing in their main object of attending the Institute.

Frank A. Kanaly, athletic coach at Technology, spoke of the sports at the institute, urged the students to come out for sports and urged the student body to support the athletes with just such " smokers " as was being held.

The United States naval aviation band played several pieces at the opening of the program, and accompanied the singing later on in the evening. Several of the students added to the evening's entertainment with songs. The chorus singing was led by Henri P. Beaugard, Young Men's Christian Association song leader of the United States Steamship " Pennsylvania." A collation was served.

BUILDINGS OF S. A. T. C. GO TO PROVOST GUARD

Northeastern Department of Army Stations 750 Men on Institute Grounds — Mess Hall and " Y " Hut Closed to Students

OCCUPANCY BEGINS JANUARY 6

THE entire set of buildings which was constructed for the use of the Student Army Training Corps at the Institute has been turned over for an indefinite period to the Northeastern Department of the United States Army for the use of the provost guard detailed to this district, according to an announcement made by Horace S. Ford, bursar of the Institute. The contract made for the new occupants includes the use of the " Y " hut and the mess hall, and these will be closed to students after Monday, January 6. Although no definite information has been released concerning the men who will be stationed here, it is believed that they are to come from three companies, now at Camp Devens.

About seven hundred and fifty men are to be located here, and they will need the entire barracks for living quarters. They will be served " chow " in the mess hall and will use the " Y " hut as a recreation building. Mr. Palmquist states, however, that until Monday the hut will continue as a student resort and that the book exchange established there will continue until this date. Until January 6, second hand books may be obtained there and after this time the business will be taken over as usual by the Technology Christian Association.

THE PERPLEXITY OF THE S. A. T. C.

Would they be demobilized or not? — the changing focus during last December

THE uncertainty under which everybody at the Institute lived, teachers and students alike, as to whether the S. A. T. C. plan was to continue or whether the men were to be demobilized at once, is best illustrated by newspaper extracts of that month, quoted in the present tense, without change. The first is from "The Tech" of December 16:

"There has been a great deal of conjecture as to whether the S. A. T. C. would break up, now that peace is imminent, and there will be no further use to train men as officers. The army unit will continue as usual, and the men in it need not fear an immediate discharge. A special order which has been received from headquarters follows. It begins with a telegram from the Committee of Education:

"'November 13, 1918.

"'Massachusetts Institute of Technology, Cambridge, Mass.

"'S. A. T. C. will continue military and academic work without interruption, regardless of armistice. Plans have been prepared for the future of the S. A. T. C. under conditions brought about by the armistice, which will be sent to you and the college authorities as soon as authorized. Inform college authorities of this wire.

"'(Signed) Committee Education Rees.'

"In addition to this the change in conditions has undoubtedly cancelled all chances of going to officers' training camps, so that every one would do well to consider this a straight educational scheme as they have always been told it was. Heretofore the academic work has been very unsatisfactory. This was partly due to conditions, but also partly due to the students' fault. They must now look on this as the serious end of their life here, and strive to make good. The Faculty will doubtless be lenient in regard to past work, but there is no reason why they should be in regard to the future. The option of sending men to Camp Devens is probably at an end, and it is presumed that the one thing that can be done to men who fail when it is clearly due to their own neglect is to give them dishonorable discharges.

"The war is the greatest event in history. Every member of the S. A. T. C. is entitled to the highest credit. He is not merely a drafted man who is too late to get into action, but he has the proud distinction of having gotten into service, even if not to the front, and having been a member of the United States army, ready for any call to any duty during the war, whereas except for his voluntary action he would never have been in the army. This heritage is worth holding on to as a real honor, and a man will be very foolish to risk dishonorable discharge now by unworthy conduct."

The next phase is best shown, after some weeks of rumor and uncertainty in which the Institute morale was visibly dropping, by an article by John Ritchie, Jr., in the "Christian Science Monitor" of November 29:

"Demobilization for the S. A. T. C. at the Institute is set for Wednesday, December 4. Everybody appears to be pleased excepting perhaps Bursar Ford, who will have on his hands the settlement with the United States War Department, with which the Institute, as in the case with the other colleges in the land, has only a verbal agreement.

"The opinion of the Faculty was voiced a few days ago by one of them, who said that the present arrangements could not end too soon for him, while incidentally the students allow that now they may perhaps get time for the studies to which the military regime has obliged them to give only second place. The Faculty of the Institute decided at a recent meeting to return the academic part of the curriculum to its old standing, S. A. T. C. or no S. A. T. C., and this has been waiting only for the determination of some of the details before announcement.

"At the moment the Government is paying for the board, lodgings and tuition of twelve hundred or fourteen hundred students, who will later be thrown on their own resources, probably with the beginning of the second term. In a good many colleges it is the apprehension that many of the students will discontinue their work with the cessation of the S. A. T. C. The feeling at the Institute does not go far in this direction. It is true that most of the young men are either students who are in their sophomore or junior year and will remain, or else of the rating of freshmen and were competent to enter as such at the beginning of the term. The effort to secure other students from the high schools for whom, at the request of the War Department the entrance requirements were lowered, was not particularly successful and instead of the couple of hundred that the Government expected would enter there were only a few. The student body will therefore be much the same as in past years, and is likely to be quite as able to meet the financial requirements. The presence of the barracks may help for a term or two to house them.

"With reference to the stuctures that Technology has erected at a cost of about $400,000, it will be necessary to make the best arrangement possible with the Government. When the Naval Aviation Detachment is graduated, which will be in January, it will relieve the Walker Memorial for the purposes for which it was built, namely an all-Technology clubhouse and social center. As soon as possible the work will be taken up of finishing it for these uses. The great hall, however, will no longer be used for a dining-room and meals served will be in the smaller restaurants. For the student and general use the great mess hall of the S. A. T. C. will be continued in service, having an excellent equipment for the work.

"A quick census of the students reveals the fact that the loss among the S. A. T. C. will not exceed a couple of hundred, this figure including those who had doubts about being able to finance themselves and those not heard from. In addition the Institute has announced its intention to accept a sub-freshman class to enter on December 30. Last year this class numbered one hundred and ten, and was limited by the facilities in the chemical laboratories. It should be even larger this year and will bring the total registration of Institute students to about normal, when it is figured that there is no senior class, these young men having received their degrees and gone into service a couple of months ago."

And after December 4:

"Those students who expected demobilization at Technology to begin yesterday were disappointed, for the date of the mustering out of the first group has been deferred till Monday next. Meanwhile a physical examination of the young men is under way. The students have been divided into three groups which will be taken up in this order: First, those young men, two hundred and fifty or more, the state of whose finances or other reasons will not permit them to continue at the Institute; second, the group of men, twelve hundred or more in number, who intend to continue their studies at Technology; third, a small group of men who wish to remain in the service as long as possible."

And so it went, from the middle of November to the end of December when the last of the S. N. T. C. was demobilized, a period of heart-breaking uncertainty, restlessness and slackness for every one at Technology, from the oldest professor to the youngest student soldier or sailor. And by Christmas all Technology was breathing a sigh of relief and of anticipation for the safe, secure, experienced ways of the coming term.

NOW COLONEL COLE

Edwin T. Cole receives his promotion

With a shiny eagle on each shoulder and five stripes on his sleeve, the once Major and now Colonel Cole has just right to be happy. Colonel Cole has followed a military career throughout his life. He graduated from the United States Military Academy in 1889 and received his commission as a second lieutenant in the 8th Infantry the same year. In 1896 he became first lieutenant in the 6th Infantry and in 1898 served in the Spanish-American War. In 1899 he became captain 11th Infantry and served in the Philippine Campaigns. In 1910 he was transferred to the 6th and later to the 8th Infantry. In 1911 he became a major and retired from active service on account of disability in line of duty and commenced his work as professor of Military Science and Tactics at the Institute.

The order which announces his promotion follows:

WAR DEPARTMENT

Washington, November 19, 1918.

Special Orders
No. 271-P

Extract

By direction of the President the advancement to the grade of colonel on the retired list of the army, to date from July 9, 1918, of Maj. Edwin T. Cole, United States Army, retired, under a provision of Section 24 of an Act of Congress approved June 3, 1916, amended by an Act of Congress approved July 9, 1918, is announced.

By order of the Secretary of War:

PEYTON C. MARCH,
General Chief of Staff.

OFFICIAL:
P. C. HARRIS,
The Adjutant-General.

THE S. P. E. E. MEETS AT TECHNOLOGY

In conference with British Educational Mission

At the Massachusetts Institute of Technology of the afternoon of December 6 the program of the joint meeting of the Society for the Promotion of Engineering Education and the British Educational Mission was disarranged on account of the unexpected departure on Saturday of the mission. For that reason the English speakers scheduled for Saturday's session were given right of way.

In his brief address of welcome, President Maclaurin alluded to the fitness of place and time. The river Charles, to be seen through the windows of the auditorium, bears the name of an English king who was the founder of the Royal Society, ever the patron and supporter of education, while the city in which the meeting is called to order is striving to preserve the traditions of its English ancestor on the Cam. The time for the discussion is at the end of a war which has shown as never before the importance of applied science. President Maclaurin did not doubt but that the problems to be discussed would be the same for all lands, questions ever new yet always old, and among them, how to deepen and broaden the training of engineers.

John F. Hayford, president of the society, with a confirmation of Dr. Maclaurin's words of welcome, called attention to the forced changes of the program and persented the first of the English speakers, Dr. Arthur E. Shipley, vice-chancellor of the University of Cambridge. He apologized for the abrupt departure of Sir Henry Jones, and brought the war close to his audience by stating that of the three sons of his fellow delegate, one was lost in battle, one recently liberated from a German prison, and the third, going to India, could be seen by his father only by immediate sailing for England.

Out of four thousand in the student body at Cambridge, England, he said, there are today a scant four hundred. Americans do not realize what has happened in England, in the enormous war losses. English universities are now ready for students. He proposed that one of the ways in which the United States can be very helpful is by sending the young men who must be retained overseas for courses longer or shorter at the universities of England or France. English colleges have arranged short courses for just such purposes. Then the men, should the circumstances demand, could be at their posts within twenty-four or forty-eight hours. This would be a means of uncommon strength in cementing the relationships between the two countries.

The Rev. Edward Mewburn Walker presented contrasted views of engineering education; on the one hand with nothing introduced which the young man did not expect to use in his business or profession, and on the other, the view which he emphasized, that a broad education is necessary when the engineer is to meet men. He presented the case for the humanities, noted how in the Rhodes scholarship tests stress is laid on the quality of leadership. He pictured the engineer of the future in the consideration of labor difficulties, being the possible arbitrator, because he is in contact with both factors. Unless he is a man of broad education his real chance in life is gone.

Sir Henry Miers gave a short review of his impressions of America. He spoke much about the benefit to a technical institution that would come from an academic college in its vicinity, an association that tended to the more liberal and broader education in the former. He noted the tendency now developing in England for the technical student to have the requirement of previous experience before entering the institution, and deprecated efforts to sandwich in trades with schoolwork.

Sir Henry dwelt on the desire of the English universities to exchange students with those of this country and to improve schools of research. Oxford and Manchester have already established doctorates of philosophy, based on two or three years of research work, in which studies at other colleges may be credited. He spoke briefly of the efforts in England that have been made to get the universities more directly in touch with the industries, and concluded with an outline of the broadest possible grounding for the mining engineer, for he travels far and wide, is dependent absolutely on his own knowledge, and is the most likely to come into touch with influences political and social.

The second day's sessions of the meeting of the American Society for the Promotion of Engineering Education were held at the Rogers Building on Saturday. During the morning addresses were delivered by Dr. C. R. Mann of the Massachusetts Institute of Technology and Gen. William M. Black. The latter characterized the army as the most efficient means of making the most out of men. He noted how the combatant engineer must be ready to solve any kind of engineering problem and the demands upon him make it necessary for him to be an all-round engineer. He upheld the sentiment that engineering studies should be carried along the lines of military training. The fact, he said, that " a man who falls behind never can make up the work of that day induces an ability to concentrate on the work in hand." In this, he feels, lies the strength of the graduate of West Point.

This position was vigorously combated by Prof. J. Olsen, who asserted that " civilians will not invent by the clock, and valuable as is the military system for West Point, it does not conduce to originality. Civilian colleges are designed to develop specialists, not all-round engineers exclusively, and there is some danger when men undertake to do what they are not trained to do."

General Black's view was supported by Dr. Pupin of Columbia, who felt that in this country " we are very weak in disciplina ian methods," and educational work will not improve until they are introduced to some extent.

The last half-day was devoted to discussion, one group with Dr. Maclaurin for chairman considering especially the proposed Government aid in establishing research stations. This is embodied in the Smith-Howard bill now before Congress. The suggestion is that land grant colleges and state colleges be the institutions in which such stations may be established. The S. P. E. E. put itself on record by a vote to express the approval of the organization for the general idea. Discussion was largely on how to avoid political influences in the distribution of the funds. Dr. Maclaurin would be in favor of a broader bill, Dr. Pupin was a believer in leaving the matter to the National Research Council. Dean Raymond of Iowa backed Dr. Pupin, while Dr. W. S. Franklin of M. I. T. thought that the research career ought to be made profitable to the student. It was the opinion of all that the present is the proper moment in which to undertake changes in engineering educational methods.

The general session of the afternoon of Saturday revolved about three great fundamentals. The first of these, voiced by Dr. Mann, was the amazing speed and success of military training, and the second by the same speaker, that there must be a patriotism of peace to succeed the patriotism of war. It is important to have men do as much for the country now and in the future as in the immediate past. The third enunciated was that theory and practice must go hand in hand, but theory must keep within understandable range of practice.

TECHNOLOGY OVER THE TOP IN DRIVE

Final war drive figures show total of $19,097

THE final figures issued for the United War Work drive at the Institute show a total of $19,097, which is somewhat over the estimated total given out when the campaign was officially closed. Of this amount the six members of the campaign committee gave $145 and the remainder is divided as follows: Students, $16,931; Faculty, $1998; employees, $143, and club of Chinese students, $25. Included among the subscribers are 1324 students and 107 members of the Faculty.

Regarding the subscriptions given at the Institute, the following letter from Miss Ellen F. Pendleton, chairman of the Massachusetts student division of the United War Work campaign, has been received by Mr. Palmquist.

" The Massachusetts student division of the United War Work campaign extend to you, your committee and the student body of Technology their hearty appreciation for the splendid work accomplished during the recent campaign. The way the students have risen to this opportunity for sacrificial giving has thrilled us all with pride.

Cordially yours,

ELLEN FITZ PENDLETON, Chairman.

Technology officially closed its United War Work drive on November 19, with a total of $18,661 to its credit. This amount, although it fell somewhat short of the $20,000 mark, surpassed the largest estimates which had been primarily set at $10,000 and later raised to $15,000. Of all the organizations contributing towards this total, the army unit holds first place with a grand total of $13,447, the navy comes second with a total of $2227, the Faculty third with $1850 and the civilians at the Institute, fourth with $1137.

The largest per cent of the entire subscription from Technology was raised on the opening night of the campaign, when a mass meeting held in the mess hall started the enthusiasm. The work of the committees organized in the various army and navy companies was responsible for the increasing amounts, and credit is also due Mr. Palmquist of the " Y " hut who devoted considerable time to helping along the drive.

It was the original aim to have every company in the army and navy units subscribe one hundred per cent, but this was later found to be impossible. With the official closing of the results, however, it was found that the average subscription per man in the army unit was about $18, while in the navy it approximated $11. The payments on the pledges will be made to the bursar and those who so desire may pay cash in full. Others are allowed to pay fifty per cent of their pledge on December 2, twenty-five per cent on January 18 and the remainder on March 1.

LEGION OF HONOR FOR TECH MEN

AMONG the Americans awarded the Legion of Honor by the French government for valuable war-time services are Mason S. Chace, '94, of Dorchester, Mass., and Cass Gilbert, '80, of New York, both architects.

TECHNOLOGY HELPS TO CELEBRATE THE ARMISTICE

The new buildings once more a civic centre for Cambridge, as in the Liberty Loan Drive in the Spring

With ten thousand marchers, representing the allied nations, Cambridge had the biggest parade in its history in honor of Victory Day.

Cheered by thousands of people, the parade wound through the streets to the Massachusetts Institute of Technology, where President Richard T. Maclaurin awaited them. They were the orators of the day. Fifty thousand people, massed in about the Technology building, made it almost impossible for the parade to approach.

President Maclaurin, in his victory address, said:

"There has been nothing in history comparable in dramatic intensity with our experiences during the last month. Almost every day great battles have been fought, cities captured; kings have fallen and empires tottered—and all this has led on to the splendid climax that we celebrate today.

"Peace with victory—victory over injustice, inhumanity, falsehood and all the countless evils associated in our minds with autocracy and militarism.

"The great drama has moved forward as if to the inevitable crack of doom, and if we shall use the language of our fathers, we might describe what has happened in the old phraseology:

"'And God said, I am tired of kings.'

"In the hour of victory we shall surely not forget all that we owe to that splendid band of young men that have gone forth to represent us in the great fight. They have gone by the thousands from the halls of learning that now surround us, and there are countless others like them—whether college men or not—who have given a new cause for pride in the citizenship of America.

"By their care and preparation, their high purpose, their sense of comradeship and their indomitable spirit they have given an object lesson to those at home, as well as to those abroad, of what is the real safeguard of democracy.

PICTURES OF TECH WAR HEROES

A FEATURE of the exhibition of Lieutenant Farre's paintings of aerial warfare at Horticultural Hall was a group of photographs of Technology men killed in the air service. Of the seventy Technology men killed in the war twenty-five were aviators.

The picture riveting greatest attention is that of William G. Sprague, class of 1916. He won the Croix de Guerre and a citation by Vice-Admiral Aubrey for destroying an enemy submarine which had attacked a convoy which he was protecting. On returning from that feat he was killed by an accident at his landing stage.

Stewart Gordon of Brookline, and T. C. Nathan of Newton, both of the class of 1920, died abroad. Cyril M. Angell, '18, of Abington, was pilot of a machine on which another Technology man was observer, W. K. B. Emerson, of New York. They were killed in action at the same time.

FEDERAL AID FOR ENGINEERING RESEARCH

Dr. Maclaurin fighting for the Smith-Howard bill

President Maclaurin of the Institute has recently accepted the chairmanship of the national committee for the support of the Smith-Howard bill. This bill is intended to insure support by federal aid for scientific research in each state. It involves a small amount the first year ($15,000 per state), but this seems right, for it lessens the danger from what is usually, but inproperly, called politics.

Under the influence of the United States Research Council, aided and supported by the Engineering Foundation, industrial scientific research work is just entering upon an extensive campaign, resulting from the progress and phenomenal results of the world war. In addition to a strong active committee, comprising the heads of leading industrial laboratories, and others prominently identified with scientific methods of developing American industries, an advisory committee has been formed to back the movement.

This already comprises the following gentlemen: Elihu Root, Theodore N. Vail, president of the American Telephone and Telegraph Company; Dr. Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching; Edwin Wilbur Rice, Jr., president of the General Electric Company; George Eastman, president of the Eastman Kodak Company; Pierre S. du Pont, president of the E. I. du Pont de Nemours Powder Company; A. W. Mellon, founder of the Mellon Institute for Industrial Research; Judge E. H. Gary, president of the United States Steel Corporation; Cleveland H. Dodge of the Phelps-Dodge Corporation, and Ambrose Swasey of the Warner-Swasey Company.

The nation is fortunate to have the aid of men whose experience and standing are so certain to command public recognition of the claims of scientific and industrial research work.

Science is in the air, keen competition is in prospect, and the industries are more favorably inclined than ever before to the widespread use of research methods. Their greatest leaders, moreover, are unanimous in their appreciation of the necessity of promoting research for the sake of advancing knowledge, as well as for immediate commercial advantages.

"Federal support of engineering and scientific research in American colleges has interested me for several years," says Dr. W. R. Whitney of the research laboratory of the General Electric Company. "I want to aid in its development. I think I can see better than most people about how we stand and what we need. Any attempt to advance the stand of scientific work of the country should include all the generally productive sciences.

"Any original worker in research will appreciate how hard it is for men who have the natural gift of investigation to obtain that support and encouragement which would yield to the country the greatest return for their work. Talented investigators have been forced to combine valuable research work with executive or routine university duties and the editorship of journals. It ought to be possible for this country to support gifted researchers with just that natural amount of teaching which their development and the need for passing along to others their new work dictate.

"For our young men we must make our colleges as serviceable as any in the world. In order to complete his course or to acquire some experience in scientific experimental work, the student must not be forced to go abroad. We must arrange for the development, in widely separated parts of the country, of scientific specialists like those for whom many European cities have been famed.

"In foreign countries the research work of the teachers and their coterie of students rapidly advanced the industrial activities and broadened the horizon of the people. We ought to do as well here. Our colleges have always been forced to the limit in teaching the elements to large numbers of students, and there were no funds or teachers available for advanced scientific or research work. Many of those who became teachers because of their interest in scientific truth were soon prevented by this circumstance from developing those natural abilities which they may have had. Heretofore American genius or originality has too often been exposed in the Patent Office as devoid of experience and knowledge, or it has been forced to the ground after vainly trying to get aloft through advanced study and experiment and has had to devote ten hours a day to teaching elementary matters to large classes. The disadvantage of this system has long been recognized. The method of federal support has been well tested in Europe. Those men who rapidly developed ability in special scientific lines were freed from much of the work which less gifted men could do as well, and opportunity was given to them to carry on advanced research work and to develop at the same time the spirit of investigation in the minds of many of the abler students.

THE LAST OF THE FOUNDERS

Member of the first corporation passes on

One of Boston's personal landmarks passed when Dr. Samuel Abbott Green breathed his last at Hotel Lenox, Thursday. His eighty-eight years encompassed much more of service than falls to the usual lot of man. More than one generation knew him as a real force in the life and affairs of this city. In his time he really accomplished the work of several men.

He was the last member of his Harvard class, that of 1851, as he was the last survivor of the board of incorporators of the Massachusetts Institute of Technology, which board came into existence in 1861.

Dr. Green possessed unusual executive ability and it was this notable trait that caused him to lay hold on so many tasks almost any one of which would have been deemed sufficient to have occupied the time of the man of average parts. His activities in affairs, as related to clubs, boards, and public functions began early in life and continued almost to the very last. He lived to see nearly all of his friends and associates of his more active years pass from the scenes of their life work.

Prof. Edward E. Bugbee, '00, of the Mining Department of the Institute has been granted a leave of absence to accept the position of assistant director of education for the S. A. T. C. in five southern states with headquarters at Raleigh, N. C. He will cover the states of Virginia, North Carolina, South Carolina, Georgia and Florida.

NEARLY A RECORD REGISTRATION

Even without a senior class the Institute is crowded for room and instructors — over 1900 students

ALTHOUGH there is no senior class at the Institute this year, indications grow that Technology's total enrolment for the second term will not be much below that of the pre-war days. For these excellent prospects there are a number of reasons. In the first place, the students of engineering schools like Technology had it made clear to them, perhaps to a greater degree than did the students of the purely arts colleges, that the plain duty of men being trained for special service to the country was to remain in college as long as possible. As a result most of Technology's former students stayed at the Institute, joined the S. A. T. C. and are still in college. Second, a large number of men who were sent to Technology for special training and who had no intention of staying after the war emergency passed liked the education they were receiving so well that they have determined to continue it. Third, another sub-freshman class, consisting of one hundred or more qualified high school seniors, was admitted to the Institute at the beginning of the new term. All these factors have helped make it possible for the Institute to announce by the middle of February that, with registration still in progress, more than nineteen hundred men have already enrolled in the various courses.

It is to be remembered that there is no senior class, the men who would have comprised it having by continuous study through two summers covered their work and received their degrees. They were wanted for war service of one kind or another, and are already dispersed, six months or more ahead of the regular time. The two hundred and fifty men that this class should normally include would have made the registration on a par with normal years, but even without them it is expected that enrolment will at least equal previous figures.

There is more or less gossip about one or more units of the R. O. T. C. at Technology, and it has been hinted that Col. Edwin T. Cole, now for five years professor of military science and recently commandant of the S. A. T. C., will be its commandant. No announcement, however, has been made on the subject.

The term that is just opening at the Institute is different from any that has hitherto been planned. It is largely an emergency term, and one important function will be to help the students make up the deficiencies due to the military demands of the last term. For this reason it covers twenty-two weeks as against the regular fifteen. At its close in June the students will be ready to go forward with the regular studies of the classes to which they belong.

The United States Army School of Military Aeronautics left Technology some time since, the S. A. T. C. units, both army and navy, are disbanded, and the Canadian aviators, whose bright uniforms were in contrast with the dull tone of the khaki, have likewise taken wings. The Naval Aviation Detachment has steadily diminished in number, till today there are only about two hundred at the school. These will be gone in about a month, and then the M. I. T. will again be on a normal basis.

TECHNOLOGY THRONGED WITH UNIFORMS

Registration a colorful spectacle this year — large registration — changes in the Faculty

TECHNOLOGY's main lobby resembled a miniature mobilization of the various branches of the armies of the Allies when on December 31 nearly fifteen hundred students, many of whom were returning from field duty in the war, were present for registration. Uniforms of khaki and navy blue were mingled with the forest green of the United States marine aviators, while the maple leaf of the Canadian service was also to be seen. Gold and silver bars, ensign stripes, and those of higher commissioned officers, which were nearly as numerous as the uniforms of the common privates or "gobs" bore testimony to the fact that men of the Institute have taken their places in the conflict. When registration was officially closed at five, a total of fifteen hundred men had been registered and it is thought that late registrations will bring that number up to approximately two thousand.

While the upper classes were added to by a considerable number by men returning from service, the greatest increase was made in the freshman class, in which about eight hundred men are registered.

As the REVIEW goes to press the final figures are very striking. The total registration is 1902 . . . and that, too, without a senior class. There are 863 freshmen, of whom about 300 are junior freshmen; there are 537 sophomores, and 361 juniors who will graduate next year. In addition there are 141 graduate students and specials, often returned soldiers, who find no regular senior work provided for them.

The conclusion of the war has also brought about several changes in the instructing staff. Major A. S. Smith, who was formerly superintendent of buildings and power, was released from army duty December 11 and it is expected that he will return soon. Prof. E. E. Bugbee, who has been in the South working in connection with the Student Army Training Corps, has already returned. Lieut. G. S. Tower has been appointed an assistant instructor in the course of Naval Architecture and C. E. Hanson has been made an instructor in Aeronautical Engineering. Albert F. Murray, of the class of 1918, has been made an assistant in the Electrical Engineering Department and C. C. Stockman is now an assistant in the Biology Department. Professor Shugrue, of the Department of Economics, has been granted a leave of absence, and F. H. Lahee, assistant professor of Geology, and F. V. Dupont and B. R. Cleveland, both of the Mechanical Engineering Department, have resigned.

As their engagements elsewhere are terminated the former familiar faces are returning to their places among the instructing staff. Prof. E. E. Bugbee of the Department of Mining Engineering, has returned from a southern camp, at which he had instructing duties, while Gordon B. Wilkes, assistant professor of Physics, has returned.

Among the recent appointments are Percy Marks to be instructor in English, Howard F. Reed to be assistant in the Machine Tool Laboratory, Victor O. Homerburg to be assistant in Analytical Chemistry, Donald S. Piston to be assistant in Physics and Leicester F. Hamilton to be assistant in Military Science and Tactics. Mr. Hamilton has been very active in the matter of military work, colonel of the

M. I. T. Cadet Regiment in his graduating year, he returned to the Institute the following year in the Department of Military Science and since that time has been connected with the department. On the establishment of the Naval Aviation Detachment at the Institute he was for a considerable time its instructor in military matters, and has rendered like service in the M. I. T. battalion in its different forms since the war began.

An important outside promotion has come to Prof. George E. Russell, '00, associate professor of Civil Engineering, namely, that of president and general superintendent of the Junior Plattsburg. This was established to care for men younger than would be accepted at Plattsburg, with the idea and intention of furnishing well trained material for the older officer camps, and with the cessation of the war will become a summer military camp of the first class. Professor Russell, whose specialty is hydraulic engineering, has been practically in charge of the Institute's Civil Engineering Camp at East Machias, Me., for the past two seasons. It was organized as a military camp and to him as commandant there was entrusted the entire organization and administration.

M. I. T. COMMITTEE ON NATIONAL SERVICE

Since the signing of the armistice, the Alumni Committee has reviewed its problem, and has decided to ask the Alumni who have contributed to the War Fund to renew or to continue their contributions for this calendar year.

During the past year the work of the War Service Auxiliary has been carried on—as you have learned through its printed reports—on the basis of generous contributions from members of the Corporation, from Alumni, and from a number of persons not connected with the Institute but recognizing the importance and value of the Auxiliary. With the signing of the armistice and the probability of peace and the return of our forces from Europe, the work of the Auxiliary will naturally terminate in the not distant future. On the other hand, the number of casualties in the fall and the needs of men homeward bound are certain to tax the resources of the Paris headquarters for some months to come. It is also important that the Auxiliary should be in a position to bring its records to such a state as to admit of combination with those in the Alumni office and of the ultimate publication. Not less important is the looking after the returning soldiers who may be in need of any sort of friendly aid. It does not seem wise to the Committee to make a new general appeal for the work here outlined but it is confidently hoped that those who have given will give again or will continue to make the monthly contributions for some time to come in order that existing undertakings may not be hindered or restricted.

For the Technology Bureau in the American University Union alone the Committee needs $12,000 for 1919. Reports of the great success of this Bureau come to the Committee not only from Technology men but from men from other colleges.

HARVARD DECIDES TO GO IT ALONE

Will run an engineering school of her own with the McKay million—apparent end of the dual control

THE Harvard School of Engineering has been reorganized on a basis satisfactory both to the trustees of the McKay estate and to the governing boards of the university. This has been done in consequence of the decision of the Supreme Court of Massachusetts that the agreement with the Massachusetts Institute of Technology was not in accord with the will of the late Gordon McKay, and the new plan will be subject to the approval of the court.

The instruction will be wholly in the charge of a Harvard Faculty appointed by the governing boards and will lead, after four years of study, to the degree of S. B. Higher degrees will also be granted after additional study. The work will be carried on in the classrooms and laboratories of the university, but arrangements may be made from time to time to utilize the facilities of other institutions, especially in the advanced technical courses, whenever it is deemed wise to do so.

Instruction will be offered in mechanical engineering, civil engineering, sanitary engineering, electrical engineering, mining and metallurgy and industrial chemistry.

The terms of admission to the school will be the same as those to Harvard College, and will freely admit boys with a good high school training.

Students were admitted to the school the first of January. Courses began January 2 and will be continued during the summer to enable men to complete a full year's work by the beginning of the next academic year in September.

Concerning this decision the Boston "Herald" said editorially on December 20, when the plan was announced,

"All who have the interests of technical and scientific education at heart will take satisfaction in the announcement that the deadlock over the Gordon McKay endowment is at an end, and that, subject to court approval not likely to be withheld, Harvard will open her reorganized school of engineering early in January next. The need of this reorganization became evident in November last year, when the Supreme Judicial Court of Massachusetts declared invalid the agreement reached by which Harvard suspended her instruction in applied science and devoted three-fifths of the income from the McKay endowment to maintaining the engineering department of the Massachusetts Institute of Technology.

"It was required by the agreement that education in the five branches covered should be transferred from the University to the Institute and conducted as a part of the Institute's curriculum, that the school in which the teaching was given should be located at and controlled by the Institute, and that the Harvard professors associated with the courses should be members of the Faculty to the Institute. The court declined to regard the school of applied science on the Charles River embankment as a Harvard school, a department of Harvard University, and declared its belief 'that Mr. McKay intended that not only the investment of the endowment fund, but that the education which his endowment was to make possible, should be under the control and direction of the University, its government and administration.'

"The reorganization now carried out, on a basis agreeable both to the trustees of the McKay estate and to the governing boards of the University, gives full effect to the decision of the court. Harvard's new engineering school will be conducted in the classrooms and laboratories of the University, with resort also, whenever there is need for it, to ' the facilities of other institutions '; and when income from the funds of the endowment is available for the construction of new buildings for the school they are to be erected on Harvard University grounds and bear the name of Gordon McKay. The courses will be wholly in charge of a Harvard faculty, appointed by the governing boards and having control, under the direction of the corporation, ' of all instruction given in the school wherever the instruction may be given.' The school undertakes to provide all grades of instruction from the lowest to the highest, and will keep its teaching ' accessible to pupils who have had no other opportunities of previous education than those which the free public schools afford,' the terms of admission being the same as those for students in Harvard College, except that supplementary fees for additional or for laboratory courses may be charged.

" Courses in the school or the services of its staff may be made available to qualified students from other institutions. At present the school offers training in mechanical, civil, sanitary and electrical engineering, also in mining and metallurgy and in industrial chemistry. Here, briefly outlined, is the democratic program, well worthy of Harvard, of what promises to be the greatest engineering school in the world Headed by President Lowell, it will be opened for work on January 2 next, under the happiest auspices of both time and place and with the certainty of a usefulness for the life of this community and of the nation which cannot well be exaggerated."

THE GOVERNMENT WANTS YOUR PICTURE

To the Editor of the Massachusetts Institute of Technology Alumni Magazine:

It is requested and very vigorously urged that the alumni of the Massachusetts Institute of Technology who have served in any capacity with the American Expeditionary Force and who have snap-shot photographs, taken in France, forward copies of all such photographs, together with the necessary explanatory information to be used as captions, to the Officer in Charge, Pictorial Section, Historical Branch, War Plans Division, General Staff, Army War College, Washington, D. C.

These photographs are requested for incorporation in the permanent pictorial files, which will serve as the official photographic record and history of the war.

C. W. WEEKS,
Colonel, General Staff,
Chief, Historical Branch, W. P. D.

By:
A. GOODRICH,
Captain, U. S. A., Pictorial Section.

NAVAL AVIATION DEMOBILIZING

Early in November four hundred men were dropped from the rolls of the Naval Aviation Detachment at Technology. They were transferred to Commonwealth Pier for further optional transfer to the Army Aviation, the Naval Paymasters' School or back to civil life.

The news, as announced by Lieutenant-Commander Van Valzah, in command of the detachment, had the effect of a bombshell upon the seven hundred cadets on the receiving ship. Many of them had just arrived, while others have been undergoing strenuous training for a period as high as six weeks. To these it was a bitter disappointment.

The entire Naval Aviation Detachment left the Institute Saturday, January 18, probably never to return. During the war over six thousand fliers have received their preliminary training at this school. In these eighteen months an average of two hundred men have been graduated every two weeks, trained in the theory of aerial navigation, gunnery, radio and bombing.

When the United Stated entered the war the Institute offered the Walker Memorial to the Government for use as a ground school in aviation. The navy took the building and opened the school for instruction during July, 1917. It took college men and raw material out of civil life and transformed them into naval aviation officers. Rigid examinations admitted only the best of the applicants. Each class went through the weeding-out process and under the scrutiny of experienced officers, the misfits were eliminated.

The preliminary course taught the cadets how to handle a machine gun, the theory of flying, the rigging of a flying boat, navigation, seamanship, use of instruments in navigation, motors, bombing and radio telegraphy. After completing the ten weeks' course at the Institute, the graduates were sent to naval bases where they received instruction in actual flying. Next, the aviators were engaged in actual fighting at the front, U-boat hunting in the North Sea, and coast patrol work.

There are about one hundred cadet aviators left at Technology and they constitute the last class to receive diplomas when their ground training course is completed on Saturday. None of these students will be given the opportunity to fly. Instead they will be put on the inactive list without receiving commissions.

MAJOR C. L. WILLIAMS SHIFTED TO M. I. T.

Maj. C. L. Williams, connected with the Harvard S. A. T. C. for several months and also in charge of the applications for the O. T. C. in this district, has received orders to report at Massachusetts Institute of Technology, and will enter actively on his new duties today. Col. C. A. Williams, father of the major, who has been commanding officer of the Harvard S. A. T. C. ever since its organization, is to return to Washington this week. He came out of retirement last August to assume the Harvard command.

INSTITUTE REPRESENTED

SINCE the beginning of the war twenty of the chemistry professors of the Institute have entered the Chemical Warfare Service. Much of the splendid work which has been accomplished in the service during the war is due to the efforts of our own professors. Our chemists have done distinguished work both in this country in research and in active service in France.

The present American gas mask is considered by far the most efficient that was in use during the last few months of the war. To turn these masks out in sufficient quantities to supply the enormous army which we are maintaining abroad, and yet be sure that every one is perfect as it must be, has been one of the biggest jobs that presented itself. The chemistry department of Technology has given twenty men to the Chemical Warfare Service, fifteen of whom are commissioned officers. Most of the professors who remained here have been doing consulting work for the Government. Dr. Henry P. Talbot, who is head of the chemistry department, although continuing his work here, is a member of the consulting board of the Bureau of Mines, is also on the consulting board of the War Department, especially in regard to gas defence. Dr. Warren K. Lewis, the youngest professor at the Institute, deserves particular credit for his work, according to "The Retort," the newspaper published by the American University Experiment Station. Dr. Lewis is assistant to the director of the Gas Defence Department, his particular work being the working out of the defence problems. Other men from Technology who occupy important positions in this service are Col. William H. Walker, Col. Dewey, Maj. Samuel P. Mulliken, Maj. L. T. Sutherland, Maj. Robert E. Wiedon, Capt. John B. Dickson, Capt. F. Hastings Smyth, Capt. John S. Little, Capt. William B. Leach, Lieut. Wilfred A. Wylde, Lieut. Edwin S. Wallace, Lieut. Charles L. Burdick, Lieut. Earle P. Stevenson, Sergt. Stanley L. Chrisholm, Corp. James F. Maguire, Jr., Corp. Walter F. Hall, Pvt. Clarence L. Nutting and Pvt. Stephen G. Simpson. Besides these men there are three men who obtained commissions for overseas service, and have been in active gas defence work for some months. They are Lieut.-Col. James F. Norris, Maj. Hugo H. Hanson and Maj. Frederick G. Keyes. Professors Noyes, Moore, Millard, Sherrill, and Kneeland are doing research work, Professor Noyes being on the National Research Committee.

TECHNOLOGY TO SUFFER NO LOSS

EQUITABLE financial adjustments will be made by the War Department with educational institutions which have suffered loss by reason of the demobilization of the Student Army Training Corps. The announcement that such an arrangement had been reached was contained in a letter from Major Ralph Barton Perry, secretary of the committee on education of the general staff, made public by the Merchants Association, which had instituted an inquiry into the subject.

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MISCELLANEOUS CLIPPINGS

Engineering by the "Case Method"

Almost revolutionary are the changes recommended for teaching engineering by the last bulletin of the Carnegie Foundation for the Advancement of Teaching. But they represent not only thorough study by expert brains, but much sentiment in the engineering profession. In brief, the report complains that the teaching of engineering has been unprogressive and is defective in manifold ways. The chief defect alleged is the method of drilling the student in a great array of principles and facts and having him then proceed to their practical application in his technical work. The report urges the substitution of something like the "case method," which Professor Langdell introduced into legal education, so that the general principles should be evolved from practical cases given the student—the testing of a dynamo or building of a pump. Dr. Charles R. Mann, formerly of Chicago University, is author of the report. The studies on which it is based were begun eleven years ago by the Society for the Promotion of Engineering Education, representatives of which, of the American Society of Civil Engineers, and other engineering societies, and the American Chemical Society, have assisted Dr. Mann.

The critic will at once ask, "Is not all engineering study filled with case work?" Do the students not spend long periods in shops and laboratories at hard manual work, do they not go in summer into engine rooms and machine plants, are they not often compelled to spend apprentice periods in technical establishments as part of college training? True; but this is not "case study" in the sense meant. It is practice work. Langdell's discovery was that, while the student could not master the vast array of legal facts in our libraries of law reports, he could learn law by working out from a comparatively small number of typical cases its fundamental principles. His method is sometimes called the laboratory method, but is really quite different from much of the laboratory method of teaching technology. This report maintains that in the latter case the student is too often not evolving principles for himself, but simply having theory and detail drilled into him. He "undertakes to learn a vast body of theory under the name of physics, mechanics, or chemistry, illustrated in some measure in the laboratory, and then seeks later to select from this mass of knowledge the principles to be applied." We are assured, for example, that the laboratory experiments in physics have invariably as object the verification of some law the student already knows, the visualization of some fact he already knows, or the determination of some known constant. In chemistry a great number of rules and facts are taught by lecture and text—and then verified in the laboratory. So with mechanics. The aim is to stock the student's mind with facts in preparing him to solve real problems in the laboratory during his course and in life after graduation, not to recognize principles and think for himself.

Mathematics is now taught in a number of disparate branches—calculus, descriptive geometry, etc.; the report proposes that an effort be made to teach it as a whole and link every problem with a bit of engineering work which would demand a certain rule. The report suggests that the student's powers of original thought would be stimulated—though this would not be so if his instructors thought that "case work" meant easy work. The fact is amply attested here that engineering employers care little for technical ability compared with a half-dozen other qualities. Of these, character and efficiency, which between them must comprehend ability in original thought, are foremost. Even personality seems generally rated higher than parrotlike knowledge of technical facts. Again, Dr. Mann maintains that the present school work, particularly in its first years, is not a full or fair test of the student's ability to be a good engineer, and that some find out late or not at all that they have missed their bent, while others are forced out who should continue.

Full application of the proposed reform would plainly need protracted educational experimentation. But the report informs us that a few applications have already been made. One is at the University of Washington.

Mechanics is usually placed in the third year, so that students may be well prepared for it in the physics and calculus. The conventional course begins with the statement of definitions and deduction of general principles, followed by the solution of typical problems Professor Moore begins by asking the students to report on the safety of sheet-piling in a certain cofferdam. Theory and principle are worked out and proved as they are needed to solve the problem. . . . Last year the same course was tried, including the calculus, on one section of freshmen, who mastered it with little more trouble than the juniors. As a result, the entire engineering faculty now sanctions this order of topics from application to theory as a great improvement.

At Cincinnati University a similar reorganization of chemistry has been tried. After brief preliminary study, freshmen work all day in the laboratory for ten weeks, solving without instructions such problems in industrial chemistry as "make baking powder and determine whether it is better and cheaper than any you buy." Boston Tech and the University of Wisconsin have devised two years' continuous mathematical study that lays aside the old divisions and pays close attention to applications. Dr. Mann's discussion of the shop work which the Universities of Illinois and Cincinnati have highly developed in different directions shows that it may easily contribute to illuminate theory and make it significant as well as to give information and dexterity. No doubt, such experimentation will continue, and in proportion as it is thoughtful and careful, prove valuable. Such attempts to use the "case system" principle will especially demand teachers of the best class, and with inferior teachers would probably prove disastrous.—NEW YORK EVENING POST.

American Engineering

THIS seems to be an odd moment for the recent pessimistic utterances of one of the professors at the Massachusetts Institute of Technology on the need of better training in all our engineering schools. For the fact is, not only have the professional engineers and their associates from West Point and Annapolis and all their amateur assistants who went into the army and navy covered themselves with glory in the war, but at this very moment, when the English University Commission has started back for home, its farewell opinion is more than usually flattering to American collegiate and university education. Moreover, what it particularly admired and marveled at was the splendid equipment of the technical schools and the physical laboratories in our larger institutions. In this it but confirmed English opinion as expressed in the friendly report of Alfred Moseley's unofficial commission, which made a survey of engineering training and practice in this country about a decade ago, a report that was a great tribute to the American trained engineer and to American schools.

But if any confirmation of the value of the American engineer and of the technical training that has given him an efficiency recognized everywhere be needed, it will be found in Professor William M. Sloane's brilliant account of his experience with the leading German magnates when he was one of our exchange professors. In his inimitable way, Professor Sloane has told how these German specialists fumed at the mouth because the American engineers were successful and beat the German engineers, when from the Prussian point of view such a thing ought to have been impossible, since America was a wretched country, without standards of education and without individuals possessing any capacity for science or Kultur. Well, as the very modest recent report of President Vail, of the American Telephone and Telegraph Company, shows, in his discussion of the new multiplex device for phone and telegraph, the invention, one of the greatest ever made, was not the freakish discovery of one mind, but the result of the team work of hundreds of men on the company's technical staff. Not only that, but suggestions from men trained at Annapolis and West Point also proved helpful. In other words, the discovery was the result of the high equipment of the average American trained in the average school of technology or in that of trade experience. And one naturally mentions this multiplex discovery, since, taken in connection with the resourcefulness and initiative which mark so much of the college-trained, school-trained and shop-trained Americans on the battlefield in which they completely outclassed their German opponents, it is a feather in our cap and calls for some little reassurance, if not complete optimism, as to the American methods of the present.

Moreover, the English engineer has also shown up well in war, although Germany despised the English experts for years and also had a poor opinion of the Frenchman's ability. And yet the English tanks, the French baby tanks, the French guns, to say nothing of the supreme French airplanes, and also not forgetting the Italian engineers and mechanicians who reached an almost super-excellence, have all achieved wonders in the war and beat the Germans point by point in every line of action. The fact is, we must stimulate our own and we must increase our facilities for training engineers and for reaching down and connecting and gearing up the various engineering trades with the technical colleges and universities. But while it is quite right not to relax or fall back, at the same time we should take a little satisfaction in the evidence that the German system of education and the state-commanded scheme of a standardized universal Kultur has proved a failure so far as the question of developing men with initiative and individual resourcefulness is concerned. That our laboratories are likely to attract English students is another thing we can take to heart with comfort. Aside from this, it is clear that as civilization in the future will demand more of the engineer than ever, this demand our schools and colleges must meet. That they will no one can doubt. And as a sort of first instance, the recent reorganization of the Yale Graduate School by which the Sheffield Scientific School and the arts are grouped under a common head with an increase of the undergraduate scientific course from three to four years is proof of the pudding.—PHILADELPHIA PUBLIC LEDGER.

TECH MEN IN PUBLIC EYE

DWIGHT P. ROBINSON, '92, VI, a former partner of Stone & Webster, in charge of their construction and engineering business, has opened offices in New York under the name of Dwight P. Robinson & Company, Inc., constructing and consulting engineers. Mr. Robinson's work runs back for a period of twenty-five years, during which he has been associated with Stone & Webster, first in the management of some of their electric railway and lighting properties, later, for fifteen years, as president of the construction and engineering branch of the organization. Since 1912 he has been a member of the firm. Some of the more generally known projects which came under his personal supervision were the extensive water-power developments serving the Puget Sound cities, the steam and water-power plants supplying Minneapolis, the electrical and transmission features of the Keokuk development on the Mississippi, the big Creek development serving Los Angeles, large steam power stations for Buffalo, Boston, Minneapolis, New Bedford, Youngstown and other smaller plants, aggregating over 500,000 kw. capacity, in addition to the new home of the Massachusetts Institute of Technology. Mr. Robinson is a graduate of Harvard University as well as the Institute.

DON LOOMIS GALUSHA, '04, VI, who is one of the electrical engineers of the newly organized consulting engineering firm of Dwight P. Robinson & Company, Inc., has been working under Mr. Robinson's direction for twelve years, the last five as head of the electrical division of Stone & Webster. His experience also covers a long list of power stations and industrial plants in all sections of the country. Some of his best-known work was done as electrical engineer in charge of the Mississippi River power development at Keokuk and the Minneapolis General Electric Company's large steam station, replacing one destroyed by fire. This was built in less than four months, although it involved extensive changes in the system of distribution and control through substations, overhead high-tension and underground systems. His experience has also included the design, construction and operation of hydroelectric stations, substations, transmission lines, motor applications, lighting and power in industrial plants and apprentice and test work in the Westinghouse Electric & Manufacturing Company. He is thirty-seven years old and a graduate of Technology.—"Electrical World"' December 14, 1918.

JOHN F. WESSEL, '98, VI, who about a year and a half ago was elected vice-president of the United Gas & Electric Engineering Corporation, has just been appointed chief engineer of the corporation in addition, succeeding L. J. Hirt, who has resigned. Mr. Wessel for many years has been identified with lighting and railway interests. He was general manager of the Mahoning & Shenango Railway & Light Company of Youngstown, Ohio, prior to coming to New York toward the end of 1913.

ELISHA LEE, '92, I, the new Federal manager of the Pennsylvania Railroad, was born in Chicago, September 24, 1870. He was graduated from the Massachusetts Institute of Technology in 1892 and immediately entered the service of the Pennsylvania Railroad as rodman.

Seven years later he was made assistant supervisor and four years later was made assistant engineer in maintenance of the right of way. He then became chief engineer and was made superintendent of the New York, Philadelphia and Norfolk Railroad in 1909.

In 1911 he was appointed as assistant to the general manager of the lines east of Pittsburgh and in 1916 was made general manager of the operating department for the lines east of Pittsburgh.

At one of the recent sessions of the Harvard-Technology School of Public Health, Dr. W. T. Southwick introduced for the speaker an alumnus of the institute of 1909; ALBERT T. STEVENSON, now sanitary engineer in the United States Public Health Service. His work has been of late in the development of "reconstructed" milk. This is in brief a dried milk with which numerous practical experiments have lately been made. One of the war problems has been a milk supply for the mushroom cities which the munition plants established in out-of-the-way places have developed. In New England, which is a cow country, such questions need never come up if the milk situation is handled with intelligence in its legislation, but there are many places where there are no cows and where the problem of milk is very serious. Such a one was Nitro, W. Va., where a powder factory was established and which grew very rapidly.

With the building of the city of Nitro came this question which the service undertook to handle. There was no labor outside of the factories, even if there had been a supply of cows in the district. At the same time families had moved there with children and milk was necessary. Here it was that reconstructed milk received a definite and successful trial.

The building and the organization of the United States Aircraft Plant at League Island were intrusted to COMMANDER FREDERICK G. COBURN, '07, naval constructor — in the words of the ancients, a "presence, not a Voice." Naval Constructor Coburn literally built the plant from the ground up. He was to be seen on the grounds from "early candle lyte" until the last torches went out, in a faded old uniform, giving little more than an official hint of his rank and responsibilities. Caught in a corner toward the last of the enterprise, he confessed that he had been trained at Annapolis, put in three years as a line officer, then gone to the Massachusetts Technology, becoming a master of science, and followed this with practice as a naval architect and marine engineer, specializing on destroyers. He put in three years at Mare Island, Cal., three more at League Island and three at the Boston Navy Yard. When the war came and the cry went up for airplanes, he was sent to Philadelphia.

NEWS OF ALUMNI ASSOCIATIONS

Washington Society of the Massachusetts Institute of Technology.—Annual meeting, December 10, 1918. The Washington Society of the Massachusetts Institute of Technology held a successful meeting December 10, at the University Club. About fifty of the seventy men present were in uniform. Free "movies," informal talks by prominent Tech men, and the annual election of officers made up a program which was interesting and lively. Calvin Rice, '90, secretary of the American Society of Mechanical Engineers, said that three men of a committee of nine engineers on their way to France to assist in reconstruction work were Tech men, namely, George F. Swain, Charles T. Main and George W. Fuller. Professor Dewey left an economic problem to solve, as of old, and "Ike" Litchfield told of his work in the Department of Labor and spoke optimistically of the business future of the country. The officers for the succeeding year are:

President, Major A. N. Holcombe, '04; vice-president, F. W. Swanton, '05; secretary-treasurer, E. J. Casselman, '15; member of Executive Committee, E. B. Phelps, '99. For the secretary, E. J. Casselman, '15, 3519 Lowell Street, N. W., Washington, D. C.—Roy R. Ganger, '17.

New Bedford—Technology Club of New Bedford.—The annual meeting of the Club was held Thursday evening, November 21, at the Wamsutta Club. Fred E. Earle, '06, was elected president, Charles L. Faunce, '88, member of the Executive Committee, Charles F. Wing, Jr., secretary and treasurer, pro tem; Charles L. Lawton was re-elected member of Council. Mr. Howes of the Island Oil and Transportation Co., gave a brief address on his problem on converting coal barges into oil barges. There were fifteen members present.—Charles F. Wing, Jr. '98, Secretary-Treasurer, pro tem, 36 Purchase Street, New Bedford, Mass.

Louisville—Technology Club of Louisville.—In reply to the editor's letter of December 4, 1918, and previous communications, I wish to advise that our Louisville Club is not a very active organization, and, in fact, has not had any meeting for a long time. I regret, therefore, that I am not able to advise you of any recent activities of the Club nor of its individual members.—L. S. Streng, '98, 311 West Chestnut Street, Louisville, Ky.

Milwaukee—Technology Club of Milwaukee.—I have nothing new to report for the January class notes. It is rather difficult to keep in touch with the boys as they are all busy with their particular work and have scattered somewhat.—J. F. Blackie, '04, Milwaukee Coke and Gas Company, Milwaukee, Wis.

Syracuse— M. I T. Club of Central New York.—The first monthly dinner of the Club for the season was held at the University Club at 6 p.m. on the evening of December 12.

Officers were elected for the ensuing year as follows:

President, J. L. Curtis, '02; vice-president, Harry Burhans, '07; secretary-treasurer, J. S. Barnes, '08; executive committee, H. E. Batsford, '08, F. J. Chesterman, '05.

We had expected to have Mr. R. B. Ware, one of our members who is secretary of the Thomas Morse Aircraft Corporation, tell us something about his activities during the past two years, but unfortunately he was called to Washington at the last minute and we were disappointed. We hope to have Mr. Ware with us at some future time.

It is our purpose to make all of our meetings, which we intend to have monthly, particularly interesting through having some feature either by Technology men or possibly some outsiders. We believe by so doing that we can build up enthusiasm which will make our club one of the best in the Association.—J. S. BARNES, '08, Secretary, Merrell & Soule Co., Syracuse, N. Y.

CINCINNATI M. I. T. CLUB.—Our regular meetings consist of one annual winter meeting, one (sometimes) summer outing, and the Tuesday noon to 2 P.M. lunches each week. We had hoped to have the winter meeting this December, but it did not develop, so we shall probably hold it during the coming January. Please note that the location of our Tuesday lunches has been changed to Schuler Cafe, 626 Vine Street, second floor, where there is always a welcome awaiting strayed or lonesome Technology men who happen to be in this vicinity at the proper hour of the proper day; and at any other hour of any other day we will be glad to welcome him or them.

On Monday, December 9, our membership suffered a great loss in the death, at his home in Germantown, Ohio, at the age of 68 years, of John A. Hildabolt, of the class of '75. If I am correctly informed, Hildabolt took the course in Civil Engineering, entering in 1871, having been the first boy graduated from his home high school. At the time he entered, as he expressed it, it took nerve to go away up to Boston Technology from this far west. For a while he worked along his line in engineering, but the greater part of his business career has been in the furniture and undertaking business, in which he has been prominent for many years. He never married, but lived with his two maiden sisters in the old homestead, where he had lived for more than sixty years. He was a member of the Scottish Rite, and belonged to Antioch Shrine; also a member of the Odd Fellows. I am enclosing a likeness of him, the publication of which we would consider a compliment, and I know would be of particular interest to his classmates of '75, who read THE TECHNOLOGY REVIEW. —MORITZ SAX, '96, Secretary, 1011 Fourth National Bank Building, Cinncinnati, Ohio.

NIAGARA FALLS TECHNOLOGY CLUB.—Have been in hopes of having some news from the Niagara Falls Technology Club for January REVIEW. The ban placed on account of the "flu" epidemic has stopped all gatherings. With the new year we will start afresh.—NORMAN DUFFETT, '11, Secretary, Care of Union Carbide Co., Niagara Falls, N. Y.

NEWS FROM THE CLASSES

1868

ROBERT H. RICHARDS, Secretary, 32 Eliot Street, Jamaica Plain, Mass.

The class of '68 gathered for a dinner at the Engineers' Club on the evening of December 19, 1918, to celebrate the fiftieth anniversary of its graduation from Technology. Six were present: Eli Forbes, Robert H. Richards, Eben S. Stevens, William E. Stone, John B. Twombly, and D. M. Wheeler.

The meeting was full of enthusiasm over the work that Technology had done for the members of the class, and the great good that Technology had done in the world. The general trend of the discussion may be epitomized in this way:

The extraordinary foresight of President Rogers in beginning the Rogers building with only seven pupils in the school (it may well be doubted if such a venture was ever before undertaken), proves how fully he understood the need of this new scheme of education. The great foresight of Dr. Maclaurin and his supporters in launching the fine new buildings with classrooms, laboratories, and workshops for the present need and future growth of the school tell us of the great work that he believes is in store for the Institute in the years that are to come.

Eben Stevens proposed, and the members drank to, the toast, "May the next fifty years at the Institute show as much development as the last."

The figures for the class are: Known to be living 15, deceased 27, addresses and whereabouts unknown 21, total 63.

The very large number of addresses unknown is due to the fact that in the early days of the Institute very little was done towards following up the men. This is greatly to be regretted.

1873

SAMUEL E. TINKHAM, SECRETARY, THE WARREN, ROXBURY, MASS.

Pottstown, Pa., Aug. 23.—Joseph Hartshorne, seventy years old, an expert in the iron and steel industry, often called as a witness in metallurgical patent cases, died here today. He was a son of the late Dr. Edward Hartshorne, of Philadelphia, was graduated from Haverford College and the Massachusetts Institute of Technology and took a postgraduate course at the University of Pennsylvania. For twenty-four years he was a member of the vestry of Christ Episcopal Church and for ten years was rector's warden.—PUBLIC LEDGER

1874

CHARLES F. READ, Secretary, Old State House, Boston, Mass.

No report received from the secretary.

Eliot Holbrook's present address is 7408 Colis Avenue, Chicago, Ill., with the C. B. Q. Railroad Corporation.

1878

E. P. Collier, Secretary, 256 Summer Street, Boston, Mass.

The annual dinner of the class of 1878 was held Saturday evening, January 4. The members of the class were the guests of Mrs. C. M. Baker, widow of the late president of the class, at her home, 111 Ivy Street, Brookline.

There were present Messrs. Bacon, Bradford, Collier, Higgins, Rackemann, Robertson, Rollins, Sargent, Schwamb and Williams. In addition to these, the class had as its guest Mr. Ino Dan, of Japan, son of one of its members, Mr. Takuma Dan, of Tokio, Japan.

On motion of Mr. Higgins, it was voted, as a special mark of respect and affection to the memory of Mr. Charles M. Baker, that no other president should ever be elected in his place, and that the affairs of the class be managed by an executive committee consisting of Messrs. Rollins, Williams and Collier.

It was also voted that the secretary represent the class in the Alumni Association, to fill the place made vacant by the death of Mr. Baker.

During the dinner the following tribute to Mr. Baker was read by Mr. Rackemann:

Our President,—the friend we prized,
Who was always proving his worth,
From the time he lay in his cradle,
To the time he was laid in the earth

Yet his influence still continues,
And long so may it be,
For those who are to come after,
As well as for you and me.

Such men as Baker are needed
To succor the human race,—
Their Modesty is their garment,
And Honesty shines in their face

1881

Frank E. Came, Secretary, Metcalfe Apartments, Westmount, Montreal, P. Q.
Frank H. Briggs, Assistant Secretary, 10 High Street, Boston, Mass.

Ned Warren announces the arrival of a daughter, Ruth Elizabeth Warren, born October 2, 1918.

Mr. Frank A. Ames died in Boston, November 4, 1918.

1882

Walter B. Snow, Secretary, 136 Federal Street, Boston, Mass.

Munroe, who is extremely busy as Vice-Chairman of the Federal Board for Vocational Education, lectured recently at the Institute in the War Issues course on the subject of Reconstruction. Said he, "All look to the engineer for leadership, and the next fifty years will see a great constructive struggle for efficiency, democracy and civilization. The old things are gone and Technology men must devise new ones and take a leading part in reconstruction. . . . Every one of you is in Class A, and no exemption!"

1883

Harvey S. Chase, Secretary, 84 State Street, Boston, Mass.

Among the legal notices in a Philadelphia paper is one of interest to the class of '83:

In the Court of Common Pleas No. 3 for the County of Philadelphia. Of June Term, 1918. No. 5,561. In re Petition of Albert Fink Schmidt for change of name. Notice is hereby given that on the second day of December, 1918, the above-named court decreed that the name of Albert Fink Schmidt be changed to that of Albert Fink Smith.

The secretary sent Mr. Smith the following:

Dear Schmidt: Congratulations! How are the little — now big (?) — Sch — Sh — Smiths?

Sincerely,

H. S. C., '83.

1884

Harry W. Tyler, Secretary, Massachusetts Institute Technology.
Cambridge, Mass.

The postponed annual dinner of the class of 1884 was held at the Engineers' Club on Monday, December 2, with fifteen members in attendance: Appleton, Bennett, Coburn, Dearborn, Doane, Fitch, French, Gill, Jarvis, Lull, Pratt, Stuart, Ward, Whitney and Tyler.

Letters and telegrams were read from Bonillas (the Mexican ambassador), Chase, Bridgman, Holder, Lyle, T. W. Robinson, and A. W. Whitney.

It was agreed to appoint a committee to arrange for a thirty-fifth anniversary reunion next June, and the suggestion of a week-end at some point on Cape Cod was favorably received.

"Through the return to the Boston office of Stone & Webster of I. Chester Horton, Hog Island lost the services of one of its best engineers and the real pioneer of the forces engaged on the work. The earliest studies of the Hog Island plant were made in Boston under Mr. Horton's supervision. The preliminary layouts required the direction of an engineer with exceptional judgment and imagination to enable him to picture a project of such magnitude with absolutely no precedence of any kind to serve as a guide."—Exchange.

The death of Mr. Alfred Stebbins has recently been reported to us, though it is understood to have occurred some weeks ago.

1885

I. W. Litchfield, Secretary, Cosmos Club, Washington, D. C.

No report received from secretary.

The one item of news for the class is a change of address. Robert Rhea Goodrich is at 521 East 3d Street, Anaconda, Mont.

It is reported that Ike Litchfield is to be in Washington for several months, serving his country in some important capacity; just what, he has not confided to the undersigned. As a consequence, our president Horace Frazer has thoughtlessly wished the duties of Class Secretary on to me, and I have agreed to act as secretary until the class dinner; at which time it will be up to the class to elect a secretary.

The REVIEW is going to press as I write so I have no time to collect any news for the January number; but I hope every member of the class will send something about himself or family for the next issue. It is planned to have the class dinner on the usual date, i. e. the last Saturday before Easter.

For the benefit of those who have not done those things that ought not to have done etc., I will say that the Easter comes on the Sunday following Pan-cake Tuesday, which is the Tuesday following the second new moon after the vernal equinox. Notices of the dinner will be sent to all members in ample time to prevent any one from having an alibi.

If any member has changed his address I hope he will notify me immediately so that I can at once get in touch with every member of the class. — R. H. PIERCE, Spiritous Advisor and Secretary Pro-tem; address Room 742, No. 52 State Street, Boston.

1886

ARTHUR G. ROBBINS, Secretary
Massachusetts Institute of Technology, Cambridge, Mass.

No report received from the secretary.

The editor has received word of the death in February, 1918, of S. C. Stickney, I, of New York City.

1888

WILLIAM G. SNOW, Secretary, 95 Milk Street, Boston, Mass.

J. C. Runkle, who now represents the class on the Alumni Council, has recently returned from a business trip to the Pacific Coast.

E. S Webster was chairman of the committee in charge of the Red Cross membership drive at Christmas with headquarters in Boston.

At a meeting of the members of the New England Insurance Exchange, held in December, a ship's clock was presented to Ralph Sweetland, assistant secretary, as a token of appreciation for twenty-five years of faithful and efficient service.

Joseph Cooke Smith wrote late in the fall that he worked two years for the French Red Cross and was for a time with the Duryea War Relief Committee in the war zone. For the past year he has been with the American Red Cross in different parts of France, and in the Prisoners of War Department at Berne, Switzerland.

Major Fred J. Wood is now at 7th and B streets, S. W., Washington, D. C., having been transferred from Sparrows Point, Md., where he has had charge of construction work.

Stephen Child is located in Washington at 3228 Park Place, N. Y.—William L. Dearborn is now located at Laconia, N. H.

Arthur B. Frizell has been engaged as lecturer in mathematics at Brown University in order to take care of the increased enrollment of students in this particular course.

Mr. Frizell was educated at the Massachusetts Institute of Technology and Harvard University, graduating from the University in 1893, and taking an A. M. in 1900. In 1910 he received his Ph.D from the University of Kansas; from 1906 to 1908 he was a student at Gottingen. He has had various teaching positions as follows: Instructor in mathematics in the College of the City of New York, 1895 and 1896; instructor at Harvard, 1897-1906; professor in Midland College, Kansas, 1908-9; instructor in the University of Kansas, 1909-11; professor in McPherson College, Kansas, 1912-17; University of Michigan, 1917-18.

1889

WALTER H. KILHAM, Secretary, 9 Park Street, Boston, Mass.

Wales has been interesting himself in etching of recent years and has done some delightful plates of old and new ships, yachts and other marine scenes. He persistently refuses to have a public exhibition, saying, "Wait until I can do better," but to the secretary's eye they are good enough without any further improvement.

Wales not only has a complete knowledge of ships at his command, so that the marine detail is absolutely correct, but his artistic sense gives an atmosphere to his etchings which is found in the productions of very few marine artists.

Jasper Whiting, III, is a major, and now on duty in France. Sanford E. Thompson is lieutenant-colonel in the Ordnance Department, U. S. A., Washington, D. C.

1890

G. L. GILMORE, Secretary, Lexington, Mass.

The following clippings are of interest to the class:

Warning that workers engaged on Government contracts who violate the principles of "straightforward dealing between capital and labor" will not only forfeit their jobs, but are liable to be blacklisted for the rest of the war, was issued here tonight by William Z. Ripley, connected with the Quartermaster's Department of the Army.

In expressing gratification at the settlement between employees and officials of Rosenwasser Brothers in Long Island City, Mr. Ripley declared the negotiations had been marred by the action of navy shoe vampers, who repudiated an agreement.

"The administration of labor standards stands for fair dealing and a full recognition of workers' rights, but it likewise insists upon efficiency, discipline and good faith," said Mr. Ripley. "This strike was a breach of straightforward business dealing. It will not be tolerated so far as any penalty which this office can impose is concerned."

Decision of Dr. William Z. Ripley, Administrator of Labor Standards on Army Clothing, in case of Zeeman & Grossman, manufacturers of uniforms, against their cutters, states that "evidence established the fact of a progressive decline per unit of time in output of cutting department since May, 1918. Decrease in production within last month reached point where only approximately fifty per cent of normal performance per man was had. . . . This case is peculiar in that indubitable evidence was afforded by downright admission of representative of the workers that curtailment of production was part of plan to compel firm to grant increase in wages."

Letter received from Capt. Charles H. Alden under the date of November 12. Charlie is now in France at the headquarters of the 26th Army Corps, of the American Expeditionary Force. He is quite near to what was the firing line, and has seen some of the air fights, and occasionally had a shell go over his way, and he also speaks of the celebration that followed the armistice. He does not look for an early return to this country, as his work is largely with the Quartermaster Depot, where he is busy looking after supplies.

Mr. and Mrs. Charles B. Beason issued cards for the marriage of their daughter, Elizabeth Jane, to Elliot Buckmaster, lieutenant, United States Navy, on November 8, at the Channing Unitarian Church, Newton, Mass.

Letter from Schuyler Hazard, advising that his boy is in France, having sailed on September 24. He left Technology in July, and is in the Tank Corps, 379th Company.—Frank L. Chase is with the Lone Star Gas Company, Fort Worth, Texas.—Lieut.-Col. Henry M. Waite is with the Expeditionary Forces in France, connected with the Engineering Department.—Franklin P. Gowing's business address is 230 Purchase Street, Boston, Mass.

Capt. William G. Curtis entered the service on September 5, receiving his commission in the Medical Corps. He had every expectation of going overseas, but with the signing of the armistice the chances are slim. He has been very busy, located at Chickamaugua Park, handling the "flu" epidemic.—Letters from Lieut. John B. Blood, who is on the U. S. S. "Kwasind," and for the past year has been located in the West India section.

At a recent meeting of the American Society of Civil Engineers, George W. Fuller delivered an address on "Emergency Construction Work Due to War Conditions," with especial reference to the Construction Division of the Army.

We regret to announce the death of our classmate, William Mossman, December 13, 1918. He was sick for about two weeks with pneumonia.

1891

HENRY A. FISKE, Secretary, care of General Fire Extinguisher Co.,
275 West Exchange Street, Providence, R. I.

"Our President" Wilson wishes something could be done to wake up the class, even the "dead ones." Wait until the majors and colonels come home and we will have a real celebration. He had another letter from Tappan who was still doing active work in France. Tappan commented on the fact that the French speak freely of emigrating to our country after the war, fearing high prices and high taxes at home. Any one would think by this that we do not have any high prices or high taxes here.

A letter from Morris Knowles reads as follows:

"Since finishing our construction work at Camp Meade, about a year ago, most of my time has been with the United States Shipping Board, Emergency Fleet Corporation, where I am chief engineer of the Housing Division. Our offices were first in Washington, but owing to congestion there we moved to Philadelphia, 253 North Broad Street, where we are maintaining a complete engineering organization. Our work has been extremely interesting, consisting of the supervision of engineering design and construction of more than thirty industrial towns and cities situated at the various shipyards along the Atlantic Coast and on the Great Lakes. The projected population of these towns exceeds fifty thousand. Our work has been practically unaffected by the armistice and is being pushed through to completion.

Our Pittsburgh organization has been actively engaged during this period largely on utilities and housing work in connection with the war, among other things being the design and construction of facilities at Camp McClellan, Ala., where enlargements and extensions have been in progress.

We still maintain our Canadian office at Windsor, Ontario, and work on the metropolitan sewerage and water district of the Essex Border Utilities Commission is progressing.

The following is taken from the "Standard," a weekly insurance publication:

Henry A. Fiske, for the past three years a member of the well known Boston firm of Gilmour, Rothery & Company, will retire from that connection, January 1, to join the executive staff of the General Fire Extinguisher Company of Providence, known throughout the business world as the manufacturers of the Grinnell sprinklers, dry valves and other approved fire prevention appliances.

By the change, Mr. Fiske returns to fire prevention work in which he was trained and has had broad and valuable experience, first as an inspector and later as manager of the Underwriters' Bureau of New England; as manager of the Special Risks Department of the Phœnix of Hartford; as a New York partner of Henry W. Brown and Company of Philadelphia and New York, a leading brokerage concern, and for the past few years as a partner of Gilmour, Rothery & Company, one of the most successful offices in New England.

"His training in fire prevention work has given him a national reputation, as also the fact that he is one of the authors of the Crosby-Fiske Hand Book, an authoritative work now in its fifth edition. Mr. Fiske was the original editor of the "National Fire Protection Association Quarterly," and active in the association work for many years.

The secretary's business headquarters from now on will be care General Fire Extinguisher Co., 275 West Exchange Street, Providence, R. I.

The secretary is anxious to secure up-to-date news from those who have been on the other side or who have been actively engaged in war work. Have any of you heard from Campbell, Leeming or Scudder, all of whom are, presumably, still in Europe?

William Mossman died December 13, 1918. Word received January 8, 1919.

1892

George H. Ingraham, Secretary, 2040 E 107th Street, Cleveland, Ohio
Charles H. Chase, Assistant Secretary, Tufts College, Mass.

C. F. Wallace has withdrawn from the Stone & Webster organization and has entered the service of the Government in the Emergency Fleet Corporation with headquarters at Philadelphia.

C. A. Beal has returned from Japan and his new address is 417 Park Street, Montclair, N. J.

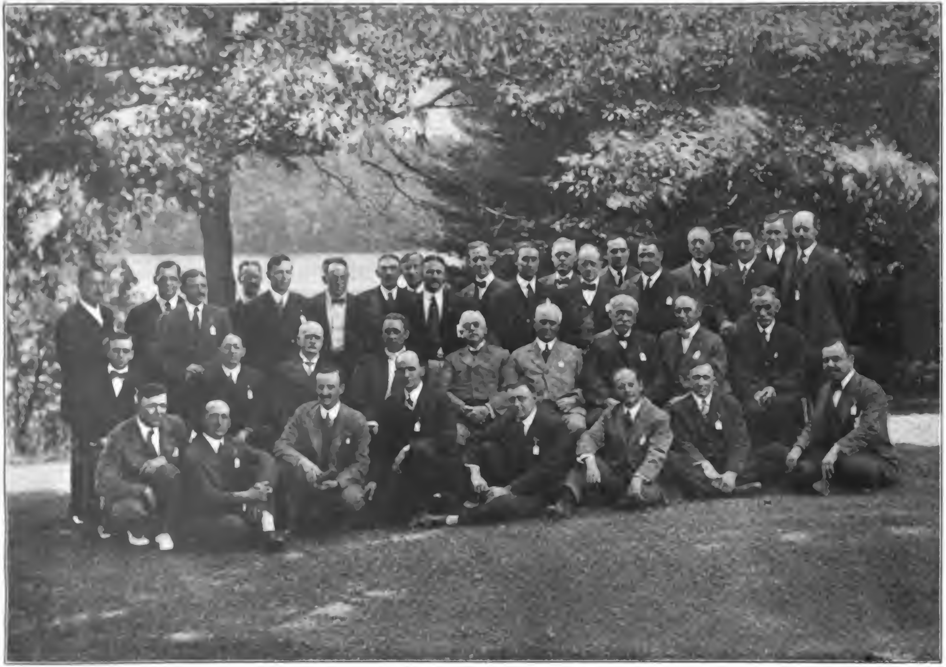
The following new addresses have also been received: Maj. Severance Burrage 72 Highland Street, West Newton, Mass.; Capt. W. R. Kales, 350 Burns Avenue, Detroit, Mich.; J. B. Lukes, 650 McKinley Avenue, Aberdeen, Washington, D. C

1893

Frederic H. Fay, Secretary, 308 Boylston Street, Boston, Mass.
George B. Glidden, Assistant Secretary, 551 Tremont Street, Boston, Mass.

War duties on the part of the class officers have seriously interfered with their duties to the class during the past few months, which accounts for the lack of '93 class news in recent numbers of the Review.

Owing to the war, the twenty-fifth anniversary was a very modest affair, and consisted of a reunion at Marblehead Neck, Mass., on the afternoon and evening of June 24. The headquarters of the class were at the Eastern Yacht Club. Members were entertained at luncheon by Henry Morss at his home near the Club. In the afternoon a part of the members, through the courtesy of Morss, made a trip in his power boat "Thais" along the Beverly shore to Gloucester and return, while those who preferred golf enjoyed the privileges of the links of the Tedesco Country Club through the courtesy of Herbert N. Dawes. The Class Dinner was held at 7.30 o'clock at the Eastern Yacht Club, and brought out an attendance of twenty-four men. Following the dinner George B. Glidden gave a most interesting account of his trip in the late winter, as a member of a Liberty Loan Commission, to England



E. W. ROLLINS, '71, ENTERTAINS THE TECH CLUB OF NEW HAMPSHIRE, JUNE 30, 1918

JOHN A. HILDABOLT, '75

and France, where he was privileged to see first-hand, nearly every form of war activity, including even an experience under fire in the trenches. The total attendance at the reunion was twenty-eight, war activities preventing a large number of our members from attending.

William T. Barnes, member of the firm of Metcalf & Eddy, consulting engineers, who has been in charge of that firm's Chicago office for several years, has removed to Boston, his address being 14 Beacon Street, Boston, Mass.

Roy H. Beattie, from the beginning of 1918, did valuable war work as assistant manager of the wood division of the Emergency Fleet Corporation, United States Shipping Board, in charge of construction of wooden ships. In recognition of Mr. Beattie's work, one of the first three ships built by L. H. Shattuck, Inc., at Portsmouth, N. H., and launched on July 4 last, was named the Roy H. Beattie, and was christened by his daughter, Miss Helen Beattie of Fall River, Mass.

Stephen A. Breed was married on June 12 to Miss Laura Post, daughter of Dr. and Mrs. Abner Post of Boston.

Francis Wright Fabyan has recently been elected president of the Algonquin Club of Boston. This is all the more signal honor from the fact that in the twenty years or more of its existence, the Club has had but one president prior to Mr. Fabyan.

The firm of Fay, Spofford & Thorndike, of which the president and secretary of the class are members and the third member took some work with '93, have been engaged since January, 1918, as consulting engineers to the War Department, upon the design and construction of the Boston Army Supply Base, a twenty-eight million dollar project now nearly completed, at South Boston.

Frederic H. Fay, a director of the Boston Chamber of Commerce, was active during 1918 as a member of the Chamber's Committee on Port War Facilities, whose function was to urge the Federal Government to make a greater war use of the port of Boston. Recently he has been appointed by the mayor of Boston on the mayor's Committee on the Development of Foreign and Domestic Commerce.

Burt L. Fenner has for the past year been engaged in war work as secretary of the United States Housing Corporation of the Department of Labor at Washington. He is a New York architect of the firm of McKim, Mead & White. He is a native of Rochester, N. Y., and received his training at the University of Rochester and at the M. I. T. He began practice of his profession of architecture at Rochester, but in 1891 joined the staff of McKim, Mead & White, to which firm he was admitted as a partner in 1906.

Charles L. Norton, professor of Heat Measurements at M. I. T., and one of the leading experts in this country on all cases of heat and of fire protection, has been engaged in war work as a member of the inventions section of the general staff of the War Department, whose function has been to co-operate ten of the technical societies of the country, the Bureau of Standards and all war agencies created for testing projects of a military sort. To this group of combined civilian and military experts, inventors submitted their data.

William Brewster Page and Miss Dorothy June Beeber, daughter of Mrs. Kimball Harriman Beeber, of New York, were married in that city on November 24. Mr. and Mrs. Page reside at 124 Summer Street, Fitchburg, Mass.

J. Ramsey Speer has been doing war work on the staff of the Alien Property Custodian at Washington, having served as a director for several of the chemical concerns formerly owned by Germans. The Bayer Company was perhaps the largest and most potential of this group.

Cadwallader Washburn, the American etcher, has recently spent four months in Siam as a result of which he made a series of interesting etchings of that country, rich in artistic interest, which were exhibited in Boston during November.

Washburn for a time was a student with the Class of '93, after which he studied under Chase and under Mowbray at the Art Students' League of New York, under Sorolla in Spain, and Besnard in Paris. He has been awarded the second prize of the Paris-American Art Association, and the gold medal of the Panama-Pacific International Exposition.

A great traveler, he has spent several winters in Mexico and has brought home many admirable scenes of trips in that country. His travels, however, have taken him pretty much over the world. He is a son of former Senator Washburn of Minnesota.

Some recent changes of address: Charles V. Allen, Apartado (P. O. Box) 76 Bis, Mexico City, Mexico.—S. H. Brockunier Chateaugay Ore & Iron Company, Lyon Mountain, N. Y.—Joseph W. Ellms, 1263 Cook Avenue, Lakewood, Cuyahoga, County, Ohio.—Samuel D. Dodge, Mahwah, N. J.—Lieut. George Gruppy, Sig. R. C. A. S., care of Adjutant General of Army, Washington, D. C.—Harry M. Latham, 30 Sever Street, Worcester, Mass.—Edward S. Page, Wellington & Page, 401 Pemberton Building, Boston, Mass.—Philip E. Perry, P. O. Box 2275, Boston, Mass.—Major Henry L. Rice, 326 Botetourt Street, Norfolk, Va.

1895

W. D. PARKER, Secretary, 12 Bosworth Street, Boston, Mass.

From a Rochester, N. Y., paper of December 28, 1918, the following interesting item is reprinted:

> The Board of Education established a new precedent yesterday when it elected Charles F. Wray its president, to succeed J. Warrant Castleman, who has been named Special County Judge. This is the first time in the board's history that the youngest member in point of service has been elected to a commanding office.
>
> Mr. Wray succeeded Howard A. Barrows as school commissioner in August, 1916. He is director of the Genesee Valley Trust Company, member of the board of managers of Hahnemann Hospital, a trustee of the People's Rescue Mission and manager and treasurer of the State Agricultural and Industrial School of Industry.
>
> It was not generally thought that the new president would accept the nomination, owing to the demand his large business interests make on his time. He is secretary and treasurer of the Henry Wray and Sons brass foundry, one of the oldest Rochester concerns, and also of the National Brass Manufacturing Company.
>
> His grandfather, Henry Wray, was a member of the Board of Education at the time when Mayor Edgerton was president, coming to Rochester from England in 1842, and establishing at that time the present firm of Henry Wray and Sons.
>
> Mr. Wray's education was received in the Rochester public schools and the Massachusetts Institute of Technology, where he was graduated in 1895.

On the eighteenth of September the secretary wrote to T. H. Wiggin, now a major overseas, and on the week of the fifteenth of December received a most interesting reply. Under date of October 27, he writes from France as follows:

> MY DEAR PARKER:
>
> You put your request for news of my doings in such a persuasive way that I am going to try and write something, though fifteen months of trying to write without saying anything forbidden by censorship rules seems to have dried up what formerly was a fairly facile pen.
>
> This constant damming of natural mental outlets is depressing beyond reckoning and turns correspondence with family and friends into a farce. The necessity of the censorship is of course recognized but when some magazine writer comes out with an

article on new machine guns, air service plans or some other sacred topic it seems for a time like wasted hardship.

Some of the earlier attempts at secrecy, when looked back on, seem like vaudeville, and the story writers have already begun to use them for humorous articles. The attempt that bothered me most was that of limiting the use of maps. At least a considerable part of the principal engineering office of the Line of Communications of the A. E. F. worked for some weeks in the summer of 1917 without marking the location of its numerous construction projects on any map. Gradually this was changed until now all important offices have wall maps with tags on pins showing where and what the projects are.

But I am "stalling" like a bather before plunging into cold water. The territory occupied by the A. E. F. is divided into two main parts, that occupied by the combatant troops or "armies," and that occupied by the "Service of Supplies," or "S. O. S.," previously called "Line of Communications" and "Service of the Rear."

I have been from the beginning in the S. O. S., and my acquaintance with the front is limited to very infrequent visits. While I have experienced the thrills of watching for submarines, of watching aeroplane raids on Paris, and listening to the explosions of the shells of the "canon de longue portee" in Paris, and have spent some days in areas near the lines where nightly aeroplane raids of very serious extent took place, I have never yet been in the trenches under shell fire nor stayed even in the areas near the front where long range shells frequently drop on important places like road crossings, railheads, material dumps, etc.

It is a very tame war for a very large number of us in the S. O. S., but it is full of hard, plugging labor, for long hours and generally seven days a week for those in positions of responsibility, though Sunday afternoon is generally free.

I have been since September, 1917, in charge of the Water Supply Section of the S. O. S. This section is simply one of the several branches of the engineering department. We are mixed up with every project, whether hospital, dock, air field, artillery shop, ice plant, railroad terminal or roadside stop, because water supply is an appurtenance of them all. Incidentally, the Water Supply Section also handles sewerage.

Up to last June we had a centralized organization, men going out from the central office to get data and then coming back to plan the work. Construction was done by local troops, generally transient, under the supervision of more or less permanently stationed engineering organizations. The central office did not by any means cover all the small projects but went where need was.

Latterly the work has been more decentralized, France in the S. O. S. being divided into nine sections, each in charge of a section engineer under whom all engineering work comes. The central office has supervisory functions and there are still occasional gaps to be filled by men from the central office.

In nearly all of the sections is a fully equipped chemical and bacteriological laboratory for water analysis, reporting to the engineers. This is an innovation in the United States Army, as such work has in the past been done by the medical department. Some very broad-minded medical department officials, among whom are the new Surgeon-General, Major-General Ireland, and the new Chief Surgeon, A. E. F., Col. W. D. McCaw, co-operated with Col. F. F. Longley, West Point, 1902, later M. I. T., '05, special student, in placing the water laboratory work of the A. E. F. on a similar footing to that of cities and states in America. Laboratory men were commissioned in the Sanitary Corps or Engineers Corps, and placed in charge of these laboratories, and all the water supplies in France are subject to their periodic inspection and analysis.

The water supplies are not large in comparison with those in America. At first we allowed twenty-five gallons pei capita for hospitals and ten gallons for camps. Now we have cut the hospital allowance to fourteen gallons per capita. Hospitals vary in size from three hundred to twenty thousand beds. Those of the latter size, none of which are yet wholly completed, will have a total population of about fifty thousand people, including personnel and patients in what is called the "crisis expansion," which is placed in tents and doubles the nominal capacity. Such a hospital, even, would be supposed to use only six hundred and eighty thousand gallons of water per day, or about the same as any little American city or big town of eight or ten thousand inhabitants, and no important manufacturing interests. The building program calls for about fifteen per cent as many hospital beds as soldiers in France, so that to keep pace with the rapid influx of troops requires activity.

The ports, warehouse yards in many parts of France, the big camps near the ports, where troops first stop, the various ordnance and aeroplane shops, and the railroad terminals and roadside stations for watering locomotives keep a constant pressure on the construction forces. My office is the clearing house for such orders and correspondence as are required to initiate and follow up the water supply and sewerage for all these projects. This correspondence is prepared for or handled in the name of the higher officers in whose hands are the engineering matters of the S. O. S.

The work includes dams, pipe lines up to twenty-four inches in size, but generally not over twelve inches, rapid sand filter plants, tube wells up to a depth of fifteen hundred feet, an occasional water softening plant and many apparatus for applying liquid chlorine. Pumps are mostly centrifugal, driven by automobile type gasoline engines. A good many triplex and simple plunger pumps are also used, also piston well pumps, air lifts, and duplex steam pumps. The centrifugal pumps are many of them made by the well known French firm, Rateau, and by dint of belt speeds up to forty-five hundred feet per minute and engine speeds of sixteen hundred revolutions per minute we get heads up to three hundred feet in a single-stage pump. I wouldn't recommend these extreme applications for peace-time installations, but they are small, light, easily manufactured and not inefficient.

Probably the most important single function of our office is the predicting of needs in the six hundred articles of water supply material required to run the A. E. F. Pipes and fittings of all kinds from three-eighths-inch to 24-inch in quantity totalling many miles per month, pumps, boilers, tanks, filters, shower baths, electric motors, engines, railroad stand pipes, liquid chlorine, well machines, etc., in all necessary sizes have to be painfully listed month by month so that they may be ordered by cable four months ahead of the time of use or even double that time to permit manufacture. A constant scouring of the British and French markets is also required to reduce trans-Atlantic tonnage and fill in gaps where America fails to "come across." Our office, though technically not a purchasing office, does a lot of hunting and following up, and originates many orders in Europe. A bird in the hand is the biggest asset in this war game and quick changing of plans is often necessary to use what can be had when the ordered material is too slow in coming.

There was one period of grim uncertainty this spring when the Germans pushed in toward Amiens and Paris, and the roll was called in the S. O. S. so that our force might be ready to join the defenders even if the S. O. S. work mostly stopped.

I have had a good many chances to see France in a very hurried and incidental way in my travels around the various projects. What French I possessed has had crude practice since my arrival and I have managed in general without interpreters, who are usually too ignorant of engineering matters to be of much help. There has been little time to study French, and the relatively small part of each day spent in murdering the language I find does not conduce to perfection or even much improvement in speaking, though it does help in understanding the spoken language. I realize, though, that an adjustment has taken place in the fifteen months and I feel at home so far as dealing with and being among the French are concerned. If one's family could be along, too, there would be no hardship in living in France, though I would never have thought to call it "sunny." It is frequently cloudy, often drizzly, but I have never seen it rainy enough to help out when the reservoir runs short of water. Heavy downpours and high winds are practically unknown so far as I have seen, and the rainfall is less than half of that at Boston or New York.

I have taken you at your word and told you about my work. I could have written about some customs, donkey and dog carts and many strange types of cart, all of which interest one greatly, ancient chateaux and dungeons, pate de foie gras, brands of wine (which I have sampled in many parts of France, but which do not compare in my benighted opinion with good New England cider about two weeks old), the beauty of France, etc., but I have already filled too much space.

With kind regards and greetings to M. I. T., and especially my classmates of '95, I am,

Very sincerely yours,

THOMAS H. WIGGIN,

Major Engineers, U. S. A., A. E. F., Tours, France.

F. A. Bourne, IV, was appointed October 15 by the trustees, head of the Fine Arts Department of the Boston Public Library. Soon after graduation Bourne became connected with this department and has given much time, principally evenings, to furthering its work. Now, however, he will give a portion of the day also to the department and will endeavor to create a wider popularity for it. Among other things, he has in mind the assembling of a large amount of data relative to post-war reconstruction in Europe. Bourne will continue to maintain his Boston office for the practice of his profession.

Since the last issue of the REVIEW three members of the class have died: Charles D. Waterbury, IV, an associate member of the class; Emerson H. Strickler, V, a post-graduate; and John L. Newell, X.

From "The Tech" of October 30:

Charles Dann Waterbury, captain, Q. M. C., of the Engineering Branch of the Construction Division of the Army, died in Walter Reid Military Hospital, Washington, D. C., on Wednesday, October 9, of bronchial pneumonia, following influenza. Captain Waterbury had charge of the drafting room, serving in his professional capacity as architectural engineer. He was buried Tuesday, October 15, 1918, in the Officers' Section of Arlington National Cemetery, Washington, with military honors.

He leaves a widow, whose brother was also an 1895 (Course X) M. I. T. man, Judson C. Dickerman. Captain Waterbury came to the Construction Division in May, 1918, occupying same position after being commissioned as before.

From the Baltimore "Sun" of November 26:

Emerson H. Strickler, eldest child of Mrs. Fianna Strickler, this city, died in New York, November 22, from a complication of diseases. He was the son of the late Bishop Henry Strickler and Mrs. Fianna Strickler, and was born April 12, 1869. He was a graduate of the Johns Hopkins University, Baltimore, and took a post-graduate course at the Boston Institute of Technology. He was a chemical engineer, and at the time of his death was a director of the General Chemical Company, of New York. He is survived by his mother, a brother, A. B. Strickler, general manager of the York Manufacturing Company, York.

In the death of Newell the class loses one of its best known members, particularly among the Boston alumni, and one of those most loyal to it. Note of his passing was given prominence in several of the Boston papers. The accompanying appreciation by Rockwell, a close friend of Newell through boyhood and undergraduate days and up to the close of his life, fittingly estimates his character and expresses the regard in which he was held by those who knew him.

John Louis Newell, an ex-president of the class of '95, died of pneumonia on October 21, 1918, after an illness of about a week. He was born on January 12, 1874, and was educated at the Roxbury Latin School, at the Massachusetts Institute of Technology from which he was graduated in 1895, in course X, and at Boston University Law School, from which he was graduated in 1899. He was admitted to the bar in 1899 and for a number of years and up to the time of his death was one of the partners of Rackemann & Brewster, a law firm of the very highest standing in Boston. He was recognized generally as an expert in the law of property, in which he specialized.

On September 19, 1900, Newell married Miss Katherine M. Hall of Brookline, Mass., who, together with three children, survives him.

His patriotism during the late war was shown in many ways, and particularly by his work as a member of the Legal Advisory Board of Brookline, and as a member of the Home Guard of Brookline, and it is likely that his conscientious performance of his duties as a member of the Legal Advisory Board during the dangers of the recent epidemic and up to within a few days of his illness, prepared the way for his untimely death. He seriously considered entering the service although entitled to deferred classification.

He was president of '95 from 1910 to 1913, and caused a vigorous reawakening of the class spirit not only at the memorable reunion at Squam Lake, but on numerous other occasions, administering his office throughout his term with notable success and increasing the strong hold he had always had on the affection and esteem of the class.

The same high character which made his home life a model and which made his professional reputation so enviable endeared him to the class, and we shall indeed miss him sorely but we shall have always in our memory the vivid picture of a real man, sterling and true.

GEORGE ARNOLD ROCKWELL, X.

Changes of address: Brig.-Gen. Dwight E. Aultman, War Department, Washington, D. C.—Capt. De Nise Burkhalter, Engineers U. R., U. S. Army, P. O. 701, Camp No. 3, A. E. F.—Frank B. Masters, 10 Fenwick Road, Winchester, Mass.—Maj. Charles A. Meserve, care Mrs. Mary L. Meserve, Gorham, Me.—Capt. Harry J. Sheafe, Belvedere, Marin County, Cal.

1896

CHARLES E. LOCKE, Secretary, M. I. T., Cambridge, Mass.
J. ARNOLD ROCKWELL, Assistant Secretary, 24 Garden Street, Cambridge, Mass.

A few items have come to the notice of the secretary regarding the men who are in service.

Johnny Rockwell writes his wife fairly regularly but does not seem to care much about his classmates. Since last July he has been major of Base Hospital No. 44 in France and reports that never before in his life has he seen so much to do or has ever worked so hard. The hospital holds about 1700 patients and is located at a famous watering resort about the middle of France. Those of us who knew Johnny intimately when he was doing about thirty-six hours of work every day will find it hard to realize that it is possible for him to work any harder in France than he did in America.

Since the war closed the secretary has received Christmas greetings from John to the whole class and the expression of a hope that as soon as he returns we will be able to get together for a regular old-fashioned class dinner, when he can tell how he won the war.

Billy Anderson, who went over with the engineers, has, as far as the secretary knows, not been active in France, but his experience in business and as an organizer made him such a valuable man that his work has been largely in London along executive lines.

Jim Hayes wrote recently from Rochester to the effect that one of the members of Anderson's Concrete Construction Company was recently in Rochester and told Hayes that Billy was expected home very shortly.

Guptill has sent the first installment of the log of his experiences as engineer, and it is so interesting that the secretary is going to give it in full in spite of the editor's request to condense all letters as far as possible. It is written from A. P. O. 713 in France:

The month of August never gave birth to a more beautiful day than that of the sixteenth in the summer of 1918, the day that the English ship, "Euripides" pulled out from its New York dock with our contingent aboard for its trip overseas. It was hard to realize in the bright sunshine and the soft southwest breeze that we were headed for what every one knew to be far more strenuous times than we had hitherto known. Even the destroyers dancing about, the dirigibles, now overhead, now in advance, the waving of handkerchiefs and hats from passing ferry boats and other craft only tended to further the impressions of a fete day. We were joined before we lost sight of land by the other transports which were to make up the convoy, fifteen besides the "Euripides," which, as we soon found, was the largest and best boat of the fleet, and we took, during the entire trip, one of the advance flank positions, due to the fact, no doubt, that the "Euripides" was well armed.

Affairs on board ship ran very smoothly after the men grew accustomed to their close quarters, which were very close indeed, and the rations, which were too small, had been bettered somewhat. Every one was kept busy with boat drills, deck drills and the regular company routine, the posting of guards and submarine lookouts. As the weather continued fine and everybody in good spirits, several entertainments were arranged for on deck; boxing bouts, wrestling, and song and dance sketches helped to while away the time very pleasantly. Everybody was of course on the watch for submarines and the submarine lookouts had strong reinforcements at times; all in vain, however, as no subs were sighted during the entire trip. Compasses were also much in use, and it was interesting to note the sudden changes of course from north northeast to southeast or south, we often made long runs directly south. All of us would have much preferred sailing down the Irish Sea by daylight; as it was, we came in sight of land about dark and the visibility was further decreased by a fine drizzle which had been with us for two days, so that our only memory of that section of the trip is a vague outline of coast, first to starboard and then to port, intermittently touched up by a glow of light as we passed some coast signal or small town. The landing at Liverpool was uneventful, excepting in the matter of delay, and about three o'clock in the afternoon we pulled out on one of the dinky trains en route for Romsey. Now we didn't know what Romsey was like and had we known, we should have had to go there anyway, so we will let it pass. At any rate, we arrived there somewhere between midnight and morning which, we were to well discover thereafter, seemed to be the one section on the face of the clock reserved for arrivals and departures. After being shown the enclosure in which we were to collect, or rather bivouac, we were more or less left to our own devices as to how to make ourselves comfortable for the night. We succeeded very well however, much to our surprise.

The officers' mess (to be taken as it reads, quite literally) was a distinct departure from all that we had so far gathered in our military education. Set under a covering of canvas in close proximity, apparently, to the birthplace of a multitude of yellow jackets, it had all the features requisite for the expediting of matters and a snappy session at the tea table. The complete meal was served to each one on a single plate, no doubt in order to better protect it from the yellow jackets and, then anyway, it didn't require more than one plate to hold it.

Here at Romsey occurred my first misfortune. The blankets which were passed on to me by my predecessor, and it has never been determined whether it was done as a joke or not, contained a flea, or perhaps fleas. Now to most people this wouldn't matter, but a flea bite is very poisonous to me, and so shortly I was covered with blotches as big as a ha'penny. In vain were the blankets aired and shaken, the flea still clung on, made desperate no doubt by the fact that the nights had become very frosty. A "fini." And it was not until we had left Romsey and were on our way that the marks of my encounter entirely disappeared.

A hike to Southampton, a swift passage across the Channel at night on the speedy little terrier, "Yale," and we were at Le Havre. Then after a three-hour hike, mostly uphill, we were at the rest camp (?) where we went into quarters for two days. There is no question but that the persons who had the laying out of this camp had, at some time, been to New England and had imbibed some New England ideas. The little huts to which the officers were assigned were very similar, in a rough way, to the little houses one sees in the backyard of every New England home where a dozen hens are kept. Here, however, the officers were fortunate in obtaining meals at the Young Men's Christian Association, which were very good. The men were not so fortunate. Apparently the English powers that be had realized that they had made a mistake in their Romsey figures and had gone all over them again, but alas, either they got discouraged with the task or hadn't enough figures to finish out with or something, because the improvement was very noticeably down hill. At some meals the men were allowed as much as one egg apiece, but many of them claimed that they were being over-rationed at the expense of their comrades, that they were getting chicken instead of eggs and threw the eggs against the wall to prove it.

From Le Havre to Gievres is a short cry but a long haul, especially in box cars and with cold rations, but we made it, and after building barracks in two days of heavy rain, moving in, and getting Uncle Sam's groceryman in the habit of calling at the back door, we were all ready to take our part in what was to come next.

This brings the narrative up to September 6, 1918, and it is expected that it will continue in serial form.

Charley Hyde was in Boston in December and the secretary saw him for only a very few minutes and left him with the understanding that a longer session would be held, but somehow we failed to connect. Charley has been doing work in camps along sanitation lines and has the rank of major. Officially his duties are general supervision of water supplies, sanitation, etc. Just now he is in the Sanitary Corps of the Surgeon-General's office in Washington and his address is: 1872 California Street, Washington, D. C.

Another man who has been laboring hard for the Government is Joe Knight, who has been counsel for the War Labor Board, and this work has kept him constantly in Washington. He has been so busy that the secretary has been unable to get any word out of him regarding his duties.

Another item which the secretary thought was going to reflect the glory of '96 proved to be a false lead. The newspapers stated that Col. Clarence Culver had made a most important invention in connection with aeroplanes, and the secretary immediately thought of our classmate of this name, but faithful sleuthing, with the assistance of Jim Haste, proved that our Clarence was leading a quiet, domestic life in Rochester, N. Y., and that Colonel Clarence was another party entirely.

The following regarding Perkins is taken from the Boston " Transcript," of December 7, 1918. He was a member of Course IX, whom his classmates recall as a quiet man, taking special work at the Institute.

Dr. Thomas T. Perkins, of Cliftondale, died of heart failure, on Friday, while attending the young son of Mr. and Mrs. Ernest A. Hogdon of Cliftondale. Dr. Perkins, who worked night and day during the influenza epidemic, had been suffering with heart trouble for some time. His automobile was out of order, so he walked through the snow to the Hogdon home. Upon his arrival he complained of not feeling well and died almost immediately. Dr. Perkins was forty-four years old. He was school physician of Cliftondale.

Frederic William Smyser died last summer. Word has just been received at the Alumni Office January 4, 1919.

Jacobs and his bride came down to Boston from Burlington over the Christmas holidays.

The following changes of address are to be noted: Lieut. Robert C. Clark, 625 Peach Tree Street, Atlanta, Ga. — Mr. Willard H. Colman, Hopewell, N. J. — Capt. Calvin I. Crocker, Engineer Reserve Corps, Camp Lee, Va. — Mr. Frederick M. Heermann, 147 Irving Avenue, Providence, R. I. — Capt. Benjamin Hurd, V.P., 64 Park Place, Newark, N. J. — Maj. Walter J. Mayo, Foxcroft, Me. — Maj. H. D. Ranson, 2d in Command Supervising Constructing, 7 and B Streets, Washington, D. C. — Mr. Frederick F. Schaller, 4314 9th Street, N. W., Washington, D. C.

1898

A. A. Blanchard, Secretary, M. I. T., Cambridge, Mass.

On November 9, 1918, Dick Brown married Mrs. Marion Browne-Sturrock. They will reside at Hotel Chatham, New York.

The following clipping is taken from the Springfield "Republican" of July 11, but reached us too late to appear in an earlier issue:

Announcement was received in this city, July 5, that Lieut. Burton A. Adams of this city has been promoted to a captaincy in the United States Army to act as the chief base censor of the American Expeditionary Forces in France. Mrs. Adams, of 41 Irvington Avenue, received a cablegram from the captain telling of his appointment. He will have the responsibility for the censorship of all the mail leaving the American forces and for that purpose will have a large clerical force under him. The work of censorship is increasing rapidly as the forces in France are enlarged. Captain Adams was born in Essex forty-three years ago and was educated in the public schools there. In 1898 he was graduated from the Massachusetts Institute of Technology and the next year he came to Springfield. He had charge of the forging department of the Technical High School after that time. Three years ago he joined the old Massachusetts 2d Regiment and held the rank of lieutenant when the regiment went to the Mexican border. He became 1st lieutenant of Co. G, 104th Regiment, last October. He has of late been detached from his regiment for duty in the office of the base censor.

Major Milan V. Ayres, VI, has resigned as senior electrical engineer for the eastern district, Bureau of Valuation of the Interstate Commerce Commission, to accept an appointment as major in the National Army. Mr. Ayres was born in Kansas in 1875 and at the age of twenty-three was graduated from the electrical department of the Massachusetts Institute of Technology. He first entered the employ of the General Electric Company at Schenectady in the testing department. In 1903 he became electrical and mechanical engineer for the Boston & Worcester Street Railway, South Framingham, Mass., continuing in that position until July, 1911, when he became assistant to the general manager of the Rockland Light and Power Company, Nyack, N. Y. In November of the same year he resigned to become chief engineer of the Mobile (Ala.) Light and Railroad Company. The following year he went with Ford, Bacon & Davis, consulting engineers, New York City, where he stayed until he became connected with the Interstate Commerce Commission in the spring of 1914.

Samuel Fosdick Jones, VII, is a major in the Medical Corps, U. S. A., stationed at U. S. A. General Hospital No. 12, Biltmore, N. C., in charge of the Orthopedic Division.

Miss Frances G. Curtis, re-elected a member of the school committee of Boston, was born in Boston and has always made her home in this city. Her early education was received in private schools, followed by a course at Radcliffe, two years at the school of the Museum of Fine Arts, a year at the Massachusetts Institute of Technology, where she studied sanitary engineering. For several years Miss Curtis was director of the Boston Co-operative Building Company, a director of the Associated Charities, of the Society for Helping Destitute Mothers and Infants and of the playground commission. She was a member of the state board of charity for fifteen years and has done a great deal of social service work. Miss Curtis has been a member of the school committee for six years, and her work has been highly commended by educators.

The present address of Van Rensselaer Lansingh, VI, is 20 Charlesgate West, Boston, Mass. Business, Metz Company, Waltham, Mass.

News is just received of the death of Luther A. Crowell at the Stamford, Conn., hospital, of bronchial pneumonia, on November 1, 1918. He was ill less than one week. The funeral was at his old home, West Dennis, Mass. Crowell, as many of us will remember, was in business with the Yale & Towne Manufacturing Company of Stamford, makers of Yale locks. He was married in 1910 to Emma Howland of Boston.

1899

William M. Corse, Secretary, care Ohio Brass Company, Mansfield, Ohio.

The following notes are all that I seem to be able to get for the January Review:

Miles S. Sherrill writes me that he is going to be married in January to Miss Mary Kellogg of Winchester, Mass. Congratulations to Miles. He has been located for the past six months in Washington on government work, but expects to finish there about Christmas time.

Walter Huniman X, Major Ordnance Department, U. S. A., A. I. of O., is inspector of ordnance at the Remington Arms U. M. C. Company, Bridgeport, Conn.

George O. Jackson, who is located at 16 St. Nichoas Place, New York City, writes that the letter from McBride in a recent number of the Review enabled him to locate McBride, besides giving him interesting information.

William M. Corse moved from Buffalo, N. Y., to Mansfield, Ohio, and is now connected with the Ohio Brass Company of that city in the capacity of manufacturing superintendent.

1900

Ingersoll Bowditch, Secretary, 111 Devonshire Street, Boston, Mass.

Now that the war is practically over and there is very little chance of many more classmates entering the service, it has occurred to some of us that the class should publish a list of those members who have entered the service and who have given their time to Government work. The secretary would be glad of any suggestions as to the form this publication should take. Should it be confined to just a list of names and the branch of the service in which they served or a short account of the men's experiences? Let every classmate consider these points and let nobody hesitate to write what he thinks. The more suggestions, the better the result.

Albert G. A. Schmidt has left Chicago without leaving his new address. Can any classmate furnish any information concerning him?

Bugbee has been appointed Assistant Director of Education for the S. A. T. C., with headquarters at Raleigh, N. C., for the five southern states, Virginia, North Carolina, South Carolina, Georgia and Florida. Owing to the change in plans of the Government, Bugbee probably will be deprived of his pleasant winter at fashionable southern resorts.

The following are the changes of address which have been received since the last letter:

J. H. Batcheller, 287 Walnut Street, Brookline, Mass.—Ensign Raymond D. Borden, 739 Rock Street, Fall River, Mass.—Major Leigh S. Keith, 3531 Holmead Place, Washington, D. C.—Major N. J. Neall, United Service Club, Dupont Circle, Washington, D. C.—Lieut. Fred L. Townley, 218 Worthington Avenue, Station R, Cincinnati, Ohio.—Percival E. True, Box 475, Elgin, Ill.—Warren C. Tudbury, 2704 Derby Street, Berkeley, Cal.—Harry M. Harps, Captain, Engineers, U. S. A., Camp Humphreys, Va.

1901

Robert L. Williams, Secretary,
107 Waban Hill Road North, Chestnut Hill, Mass.

Arthur J. Eveland is a mining engineer for the American Zinc, Lead Smelting Company of Boston. For several months he expects to be in Mexico City, located at the University Club. He writes:

> Rarely see any '01 men. Have spent most of my time abroad. Five years in the Far East, three of which as the geologist to the Mining Bureau of the Government of the Philippine Islands, later examination work in Mexico, Central America, South America in Peru, Bolivia, Chile, Argentina and Venezuela. Met C. H. Auer lately in El Paso; Fleming and Sears in Salt Lake City.

Henry R. Gilson is a consulting engineer for the United States Rubber Company, New York City. He says:

> I spent three very interesting months in England, and at the end of 1917 went through three Zeppelin raids on London and saw two of them brought down in flames by airplanes. The voyages over and back were extremely interesting, and the whole experience one I shall never forget. Oftentimes in London at night or in the early hours of the morning, from one to three, we could hear the guns in Flanders. They sounded like distant thunder. I guess we are all glad that this terrible conflict is over, but I do wish that our boys could have gotten into Germany and given them a taste of their own medicine."

Professor Edwin F. Church has been recently appointed acting head of the mechanical engineering department of the Brooklyn Polytechnic Institute, having been connected for some time with the University of West Virginia.

R. H. Stearns, after four months spent in the Canadian Rockies and Vancouver, is now located in Washington, D. C., with the Bureau of Yards and Docks, as assistant civil engineer. His work consists of getting out contracts for naval stations structures, particularly water works. He also assists the project manager, having charge of all radio structures, fuel oil storage stations, and marine corps barracks.

The Honolulu " Star-Bulletin " has the following concerning Lyman H. Bigelow:

> Efficiency all the way through! This will be the keynote of the administration of Lyman H. Bigelow, new superintendent of public works. " You had better give me a few days to 'get into harness' before you ask me to comment on any new policies of the office," Mr. Bigelow told a representative of the " Star-Bulletin." " As a matter of fact, I haven't formulated any policies yet. But you may say this much for me: That efficiency is going to be a prime factor in my office. I believe in efficiency all the way through." For the present Superintendent Bigelow will make no changes in his office staff. One of his first duties will be to select an assistant superintendent; and this man, says the superintendent, will have to be a trained engineer and one thoroughly familiar with work such as is carried on by the office. The new superintendent does not intend to tolerate untrained men on his staff. Engineers, draftsmen, surveyors, will have to be trained, efficient and capable. Untrained men now in the employ of the department will be replaced by trained men, says the superintendent. Mr. Bigelow will also be chairman ex officio of the Board of Harbor Commissioners and will attend his first meeting next Wednesday afternoon. Recently Mr. Bigelow visited Hawaii and familiarized himself with wharves, landings, bays and general conditions on that island.

Mortimer B. Foster is Chief of Miscellaneous Section of the War Industries Board, Washington, D. C.

The following changes in address have been received:

Dennis F. Haley, 822 A. C. Foster Building, Denver, Col.—Louis R. Henrich, 11 Virginia Road, Auburndale, Mass.—Prof. A. B. McDaniel, P. O. Box 1319, Washington, D. C.—Angus A. McInnes, 41 Salcombe Street, Dorchester, Mass.—Philip A. Potter, Room 316, Church Street, New York, N. Y.

1902

Frederick H. Hunter, Secretary, Box 11, West Roxbury, Mass
J. Albert Robinson, Assistant Secretary,
Care Research Division Federal Board for Vocational Training, Washington, D. C.

Maj. Lewis E. Moore is the first of our military members to be returned to civil life. Moore was commissioned as captain of engineers at the first Plattsburg Training Camp in 1917, and was soon assigned to special duty at Washington and later sent to France where his job, as at home, was bridges. He was active in settling standards and details and visited a considerable section of the Western Front in looking up the needs and pushing the construction of his special work. In September, 1917, he was sent back to this country to speed up the fabrication and shipment of bridge work, and was getting matters in shape for an early return to France when the game was called. Moore remained on this side and was mustered out in time to reach his home in Newtonville, Mass., on Christmas Eve. On the first of the year he took up his duties as bridge engineer with the Massachusetts Public Service Commission.—Barry has been advanced to the rank of lieutenant-colonel in the Quartermasters' Corps, being the first as far as we have heard among our classmates to wear the silver leaves. He is still stationed at Boston.—Maj. Charles G. Mixter of the Medical Corps is expected back in this country within a short time as this is written. His brother, Maj. William Jason Mixter, will probably remain in France for some time.—Rayne Adams went to France for the Red Cross last August in connection with construction work.

The Boston Circle of the class will miss a familiar and popular member in the removal of Robinson to Washington. "Robbie" recently resigned his position as special inspector in the Improved Risks Department of the New England Insurance Exchange to become special agent for safety and hygiene in the Research Division of the Federal Board for Vocational Education. The position is under Civil Service, Robinson having qualified in examination. At the start the work will be largely in studying the suitability of various occupations for the partly disabled soldiers, and the healthfulness and safety of the work.—Greeley was recently elected president of the Boston Architectural Club.—Hunter is conducting the course in Architectural Working Drawings at the Franklin Union this winter.

Rufus Mason Whittet died at his home in West Roxbury on the seventh of December, of pneumonia, following an attack of influenza. He had been ill but four days. Whittet entered Technology from Lowell, duly graduating in Course XI. He took a position at once in the Engineering Division of the Massachusetts State Department of Health, with which he was connected continuously until the time of his death. For some years he had been assistant chief engineer. For many years Whittet resided in Lowell, but after his marriage, in 1916, to Miss Effie Osgood Byron of Roxbury, he took up his residence in West Roxbury. An infant daughter, Helen Isabella, born on January 16, 1918, and his wife survive.

Whittet was active in Masonic circles, being a Knight Templar and a 32d Degree Mason; he was also a member of the American Society of Civil Engineers, and the Boston Society of Civil Engineers. He was author of many reports on various matters of sanitation in Massachusetts coming within the field of his department.

1903

Myron H. Clark, Secretary, 1790 Broadway, New York, N. Y.
Ralph H. Nutter, Assistant Secretary, Box 274, Lynn, Mass.

Following is an extract taken from the Newark, N. J., "Call":

After a short illness from pneumonia, Albert William Pearson died at his home, 15 Ridgewood Avenue, West Orange, on October 20, and interment took place in Fairview Cemetery, Westfield, N. J. Mr. Pearson was thirty-seven years old. Some years ago he became interested in fire insurance and became widely known here and in the Middle Western states as a fire protection engineer, and for the past five years has been connected with Atlee Brown of 40 Clinton Street, Newark, N. J.

We are also very sorry to announce the death of Elmer F. Ricker of Quincy, Mass., who died from pneumonia, October 19, 1918.

The following is an extract from the Vermont "Phoenix" of Brattleboro:

W. F. Robertson has volunteered for military service in the Artillery. He passed the physical examination in Keene, October 18, and expected to go to Fort Munroe. Mr. Robertson has been very active in civilian war work, being chairman of the Public Safety Committee, local Food Administrator, and has also been in charge of War Stamp sales work. In addition to these duties he has been an enthusiastic and valuable member of the Liberty Loan Committee. Besides family ties, he leaves an extensive and prosperous paper manufacturing business to serve his country.

Robert Livermore is connected with the Second Company Engineers, Officers' Training School, Camp Humphreys, Va.—Paul R. Parker is now vice-president and general manager of the Benicia Shipbuilding Corporation, Benicia, Cal.—Louis W. Adams is now with the Ashland Iron and Mining Company, Ashland, Ky.

Rolf Raymond Newman has written Mr. Nutter as follows:

I am leaving in the morning on the Santa Fe Limited for Washington, D. C., bound for the Engineers' Student Training School at Camp A. A. Humphreys, Va.

I was examined and commissioned Captain of Engineers, U. S. A., by telegram dated October 22, 1918, and ordered to report at 403d Engineers' Training School, Fort Douglas, Utah (just outside Salt Lake City). I was there seven days and was transferred under date, November 7, to Camp Humphreys, and am on my way.

Change of Address

W. Lorrain Cook, care Suffern Company, 135 Broadway, New York, N. Y.—Capt. George C. Danforth, 602 Engineers, American Expeditionary Force.—Robert W. Daniels, 16 Harrison Street, Brookline, Mass.—Frank R. Farnham, Hollister, White & Company, 50 Congress Street, Boston, Mass.—J. Arch. Mears, 460 Riverside Drive, New York, N. Y.—Capt. David D. Mohler, care Mrs. Rebecca M. Mohler, 707 Willis Avenue, Syracuse, N. Y.—Paul R. Parker, Benicia Shipbuilding Corp., Benicia, Cal.—Sam G. Porter, 1018 First Avenue, S., Lethbridge, Alberta.—Frank D. Rathbun, Arizona Copper Company, Metcalf, Ariz.—William H. Whitcomb, P. O. Box 143, New Haven, Conn.

1904

Henry W. Stevens, Secretary, 39 Boylston Street, Boston, Mass.

Amasa M. Holcombe, 610 Boatman's Bank Building, St. Louis, Mo.

After a vacation of several issues, we reappear with a few bits of information regarding some of our members.

Don Galusha has severed his connections with Stone & Webster, and is now associated with Dwight P. Robinson & Company, Inc., Constructing and Consulting Engineers, with offices at 61 Broadway, New York.

Ed Parker has been appointed Federal Bank Examiner for the State of Maine, and has taken up his residence at Portland.

Walter Hadley is now assistant general superintendent of the Gary Works of the Illinois Steel Works.—Another of our members has crossed the Great Divide, as evidenced by the following clipping from the Brooklyn, N. Y., "Eagle," under date of October 18, 1918:

> Edgar Field Smith, forty years old, of 80 Heyward Street, a civil engineer in the employ of the Department of Water Supply, died October 17 of pneumonia. Mr. Smith was born in Saxton's River, Vt., and was a graduate of the Vermont Academy, Boston University and the Massachusetts Institute of Technology. He was a member of the Society of Civil Engineers. Mr. Smith recently took up a summer residence in Southold, L. I., and the interment was in that town, following funeral services on October 21. He is survived by his wife, Caroline Anna Leicht; a son, Edgar, three years old; a sister, Mrs. Henry M. Brett of Miami, Fla., and two brothers, Walter Le Roy Smith, president of the Malden, Mass., Commercial School, and R. Eugene Smith, of Malden.

Mrs. John D. Mackay, of Quincy, is chairman of the Woman's Unit, National Council of Defence. Through her energetic efforts a great deal of clothing was collected, sent to the needy in Halifax; and in the recent Red Cross drive, four tons was the result.

The following lists show that the class of '04 has been of some service to our country in the late war. If any member of the class, who reads these notes, knows any other member of the class, whose name should be included in these lists, then the member mentioned above is requested to send such information to the secretary.

As given below, there are two lists, one for men in the military and naval service, and one for men who were engaged in civilian work aiding in the prosecution of the war. The secretary feels that there may be many other names eligible for both lists, and issues the above appeal for assistance in obtaining them.

In Military Service December 11, 1918

Chamberlin, N., IV, 1st Lieut., School of Mil. Aero., Columbus, Ohio.

Chapin, Harry G., I, 1st Lieut., 2d Avia. Center (Instruction), A. P. O. 717, A. E. F.

Cronin, Walter L., II, Officers Reserve Corps.

Cunningham, John E., I, before the United States entered the war he was in the French-American Ambulance Field Service. Now in American International Shipbuilding Company, Phila.

Emerson, Merton L., I, Major, Chemical Warfare Service.

Ferguson, William B., XIII, Lieut.-Commdr., Constr. C., Navy Department, U. S. N.

Gaenslen, George R., III, Capt., Avia. Sec., S. O. R. C. On December, 1917, was ordered from Vancouver Barracks, Washington, with a detached squadron to work in a logging camp to increase the production of airplane and ship stock. In this camp, fir and Orford, or white cedar, are produced. The soldiers work side by side with civilian workers.

Goddard, Herbert W., II, Capt., O. D.

Hadley, Walter E., III, 1st Lieut., Eng. C.

Hale, Richard K., I, Lieut.-Col., 101st F. A., A. E. F.

Holcombe, Amasa M., II, Major, Office of Chief of Ord., Washington, D. C., O. D., [illegible] N. A.

Hoy, Austin Y., XIII, 2d Lieut., 184th Siege Battery, Royal Garrison Artillery, British Exp. Force. Enlisted on March, 1916, was commissioned 2d lieutenant July 22, arrived in France September 8, and has been in line since.

Keenan, Joseph A., II, Priv., Dept. of Mil. Aero., War Dept. Expects to be a student flyer. Now at Mineola, N. Y., at Hazelhurst Field, No. 1.

McBride, Lewis B., XIII, Commander, Naval Construction, U. S. N., Naval Headquarters, London, England.

McEntee, William, XIII, Lieut.-Commdr., Constr. C., U. S. N.

Metcalf, Edward H., II, Machinists Mate, U. S. N. R. F.

Nickerson, Frederic, IV, 1st Lieut., Sig. C., Constr. Div., Avia. Sec.

Phinney, Robert M., VI, 1st Lieut., 415th Ry. Tel. Batt'n, Sig. C., Vendome, France.

Potter, Nathaniel R., II, Capt., O. D. Somewhere in France.

Spilman, John A., XIII, Lieut.-Commdr., Constr. C., U. S. N.

Wheat, George N., IV, Capt., care Director-General of Transportation, A. P. O. 717, A. E. F.

Whipple, Leyland C., V, Lieut., 302d F. A., Camp Devens, Mass.

In Government Service December 11, 1918

Atkins, George E., XIII, Ass't to Naval Constructor, U. S. N.

Bascom, Calvin P., XIII, Manager of Fayette, Plumb Company, engaged in manufacture of war material.

Burrows, John S., III, U. S. Fuel Administration, Distribution of smokeless coal to army transports, navy, Panama Canal, and Shipping Board at Hampton Roads, Va. U. S. Fuel Administration, Washington, D. C., Division of Distribution and Apportionment.

Bellows, Robert, Red Cross Work in France.

Carty, Maurice W., II, Mechanical Engr. at Watertown Arsenal.

Crane, Jasper E., V. 1. Research work on several military problems, principally gas masks, in connection with the Bureau of Mines, and airplane finishes in connection with the Bureau of Standards.

2. Member of Sub-Committee of Airplane Dope of S. A. E.
3. Member, Princeton Branch, National Research Council.
4. Member of Executive Committee of the Mayor's Committee on National Defence of Newark, N. J.

Crull, Clifton G., IV, Member of Home Guard.

Eager, William H., VI, Committee of Safety and Home Guard.

Emerson, Charles J., XIII, Dean of Aviation School, M. I. T.

Farrell, Frederick W., V, Secretary and treasurer of Brookfield Sub-Committees of Public Safety (Executive and Finance).

Fogerty, William B., XIII, Ass't Naval Constructor, Seattle Construction and Dry Dock Company, Seattle, Washington.

Foster, Augustus C., VI, In Washington, D. C.

Galusha, Don L., VI, in charge of electrical plant extensions at Watertown Arsenal, Rock Island Arsenal, Ordnance Base Depot in France, and other government projects carried on by Stone & Webster.

Haynes, Charles R., X, G. M. Shoe Company, Naugatuck, Conn.

Holbrook, Elmer A., III, spent the summer of 1917 as instructor in explosives and bombing at the U. S. A. School of Mil. Aero. at the University of Illinois. Now at the U. S. Bureau of Mines as Supervising Engineers and Metallurgist.

King, Carl, II, taught strength of materials to the 101st Regiment (1st Corps Cadets) at the Wentworth Institute the summer of 1917.

Kramer, Henry, I, Ass't Chief Draftsman, Watertown Arsenal.

Lynch, William D., V, Chemist, U. S. Dept. of Agriculture, Washington, D. C.

McCormick, Katherine D., VII, Woman's Committee, Council of National Defence.

McQuaid, John D., II, 1st Lieut., 7th N. Y. Inf., resigned January 24, 1917.

Mackay, Martha C., V, serving as: 1. Retail price correspondent, Washington, D. C.

2. Chairman of Woman's Unit Council of National Defence.

3. Chairman of Conservation Dept., Federation of Woman's Clubs, Massachusetts.

4. Advisory Board, Walpole Agricultural School.

5. Formed and organized Quincy Food Conservation Committee, the outgrowth of which was the public market ideal for Massachusetts.

Magnuson, Mark G., III, in charge of wood-working department, Avia. Mechanics Building, midway between Minneapolis and St. Paul.

Miller, Andrew O, VI, with J. G. White, 43 Exchange Street, New York City, Aircraft Purchasing for the United States Government.

Ovinbton, Earle L., VI, President of Sandy Point Shipbuilding Corp., Sandy Point, Me. Carrying out orders for ships worth $600,000, for the Emergency Fleet Corporation, to carry food and munitions to the allies.

Porter, Arthur P., I, designing steel for the Watertown Arsenal.

Ray, Edward R., IV, Camouflage work.

Regestein, Walter P., V, engaged in manufacture of smokeless powder. "I am employed by the E. T. Du Pont de Nemours and Company, as chief chemist of their Haskell plant. We are at present working in French 75mm powder but have at different times fulfilled contracts for the United States and English powders."

Richardson, Frederic L. W., Red Cross reconstruction work in France.

Riddell, Guy C., III, metallurgical adviser to United States Tariff Commission.

Robb, Aubrey G., II, Chief Engineer, International Works, Amherst, N. S. Manufacturing shells and marine engines and boilers for Imperial Munitions Board and Dept. Nav. Service.

Rockwood, Edward F., II, Priv., Mass. State Guard, 1st Motor Corps.

Roland, John W., I, working on the Halifax Ocean Terminals, for shipment of munition supplies.

Scofield, Edward C., XIII, Insp. of hull material, Navy Dept.

Shaw, George H., X, Dept. of Agriculture.

Sosman, Robert B., VIII, Optical glass for army and navy instruments.

Sutton, David, I, Acting structural engineer for Watertown Arsenal.

Thurlow, Oscar G., I, Chief Engineer in charge of construction of nitrate plant in Alabama.

Willard, Arthur, X, Acting as consulting engineer with the Cantonment Division of the Office Quartermaster General during the summer 1917, in Washington, D. C.

1905

Grosvenor D' W. Marcy, Secretary, 246 Summer Street, Boston, Mass.

Charles W. Hawkes, Assistant Secretary,
23 Saxon Road, Newton Highlands, Mass.

A Request

We shall shortly send out letters to all '05 men, asking for detailed information regarding their part taken in the war work, and are anxious to get a detailed reply covering activities of those who have been in the service, and also those who have been engaged in war work on a civilian basis. Please reply to our letter promptly.

Grove Marcy was home for Christmas and, while we have no definite knowledge as to the probable date of his discharge, your assistant secretary believes that the next batch of Review news will probably be written by Grove himself.

Charlie Johnston, who is manager of the Virginia Industrial Chemical Company at West Norfolk, Va., has written me a good newsy letter, which I would print in full were it not for the request to keep class news as brief as possible. Charlie speaks of Eugene Burton's death at Fort Collins, Col., but could give me no details. I have written to Mrs. Burton, but to date have had no reply. Charlie writes that Roy Allen called upon him recently, and to use Charlie's own words, " I saw little of him, but he saw altogether too much of me, I fear, for a few days after his return to Washington he was taken with the darned, old, pesky disease called ' flu,' with which I was laid up at the time he called. . . . In New York, in September, I saw Billy Green and Doc Lewis, same old big-hearted Billy, same wise old Doc. At the chemical show recently I also saw Piggy Bartlett."

Doc Lewis arrived in France shortly before the armistice was signed, and Andy Fisher's comment upon this was as follows: " Just as one might have expected. All that was needed to end the war was to have Doc Lewis go to France." Speaking seriously, however, Lewis has been doing and is still doing a wonderful work. Perhaps some of us have forgotten that Doc went to Germany after graduation, and in 1908 received the degree of Ph.D. The following is taken from an article which appeared in the bi-monthly publication of the American University Experiment Station, " The Retort," for November 9, 1918:

> In the spring of 1917, when gas warfare began to assume so important a place in the military program of this country, Van H. Manning, who was then directing the work, wired Technology the brief message, " Send me W. K. Lewis." His request was granted.
>
> Of the many capable men on the defense side of the Chemical Warfare Service, perhaps none has contributed more practicable ideas than Dr. Lewis. The modern gas mask is a tribute to his technical skill. His ability as an executive ranks with his talents as a scientist. The doctor is a striking example of a man possessing enthusiasm and unequaled energy. Few other men, for instance, could have withstood, as he did, the strain of seventeen hundred miles of travel each week, this being the average journey necessitated by his work at Technology, his unending succession of conferences at this and other stations, and his consulting practice. Of Dr. Lewis, one of his colleagues at the Institute has said: " I know of no man in the country who combines the mind of the scientist with that of the engineer and both with the teacher's instinct, to the extent that it is true in the case of Dr. Lewis."

Under date of December 26, I have received a letter from George Jones of the firm of Sheridan, Jones, Sheridan & Smith, Marquette Building, Chicago. Jones enclosed an interesting clipping from a San Francisco newspaper, which describes in some detail the work which Norman Lombard is doing as president of the Western Farm Credit Company of San Francisco.

The newspaper clipping deals with a banquet given by Norman to a number of tractor and motor truck dealers and other business men interested in arranging for credit to assist farmers in purchasing power vehicles. One of the principal speakers at the dinner summarized Norman's plan as follows: "The plan is of mutual helpfulness. It gives the farmer his machinery at once, enabling him to put it to work earning dividends for him while it is being paid for. It gives the dealer his cash, enabling him to keep his capital free for use in his business and also enabling him to do a much larger business than would be possible if he sold only on an 'all cash' basis."

Leonard W. Cronkhite has been doing a lot on constructive work on the dollar per year basis, and I have many newspaper clippings speaking most favorably of his achievements. Leonard was at the Institute only one or two years and after leaving Technology took his Ph.D. at Brown, and his B.Sc. at the University of Oxford, England. Cronkhite is special agent for the United States Department of Labor, is regional priorities advisor (of the Regional Advisor's Office), Region No. 1, War Industries Board, and is secretary of the Massachusetts Board on Non-War Construction. He has been giving a good many interesting talks before Chambers of Commerce, various conventions, employment managers' associations, etc., some of the addresses being on: "Some New Industrial Relationship," "Conservation of Labor Through Conversion of Industries," "Conservation of Labor Through Systematic Distribution."

Roy H. Allen is captain in the air service, Bureau of Aircraft Production. His address is 4th and Missouri Avenue, Washington, D. C.

Ed Coffin has been connected with the Associated Industries of Massachusetts for some time and he writes as follows:

> On October 1, I gave up my connection with the N. E. Insurance Exchange and am now the staff engineer of the Associated Industries of Massachusetts. Up to the signing of the armistice I put in all my time at the regional advisor's office of the War Industries Board here in Boston, but since that time have been very much interested in studying employees' service and welfare organizations, on which subject I hope to be of help to the more than a thousand members in our association. It is a very important part of our industrial problem and I am glad to have the opportunity to get familiar with its possibilities.

Bob Turner, who has been general manager of the Associated Industries of Massachusetts until recently, has been having a good deal of sickness in his family; his wife and children have been very ill; we believe that they are now all on the mend. The Associated Industries of Massachusetts is a most wide-awake and helpful organization, and much of its value is due to Bob's untiring efforts.

Henry R. Gabriel has been promoted to the grade of major in the Engineers' Corps.—Henry H. W. Keith is lieutenant, Naval Constructor, U. S. N. R. F.

Word has just been received of the death in September of Eugene Burton, of Colorado.

1906

C. F. W. Wetterer, Secretary, Box 168, Tampa, Fla.
James W. Kidder, Acting Secretary, 50 Oliver Street, Boston, Mass.

Death has claimed another of the 1906 men who are serving their country. Lieut. Albert Leslie Stephens, III, died October 12, at Camp Humphreys, Alexandria, Va., of bronchial pneumonia.

Stephens was born in Cambridge, Mass., thirty-three years ago. He received his early education in that city, preparing for Technology at the Cambridge High and Latin School. Following his graduation from the Institute he spent nine years as a mining engineer in Mexico, leaving that country at the beginning of the revolution. Following this he traveled for two years through South America, establishing agencies for the Maxwell Automobile Company. Later he established an agency in Caracas, Venezuela, under the firm name of Stephens, Irygoyen and Company, doing an export and import business. During this period he also represented the New York banking firm of Amsinck & Company. Early in July he accepted an offer of a commission as first lieutenant in the Engineering Corps, and on September 23 left Caracas for a course at the Officers' Training Camp for Engineers at Camp Humphreys. Beside his parents Lieutenant Stephens is survived by two brothers, George C. and Arthur H. B. Stephens, and an invalid sister Alice Isabelle Stephens.

In the death of Stephens, 1906 has lost one of its most popular men. Since 1906 his absence from Boston prevented him from attending class affairs, but he always demonstrated his interest in 1906. Stephens was in Boston during the last reunion and at that time seemed particularly happy in renewing his class associations. The class of 1906 will always honor the memory of those of the class who have died in the service of the country, and the death of Stephens should strengthen the ties that bind 1906 men to the class and the Institute.

The following is taken from the Boston "Globe" of October 17, 1918:

John G. Barry, commissioned yesterday as a major in the Chemical Warfare Service, was born in Salem thirty-five years ago. His parents live at 5 Buffum Street. He was graduated from the Pickering Grammar and the High Schools here, and from the Institute of Technology. He enlisted November 30, 1917, and was commissioned a first lieutenant in the 116th Regiment of Engineers and went to France with that command.

Barry's name is a new one upon the 1906 Roll of Honor.

Frank A. Browne, XIII, who has been with the Fleet Corporation since its beginning in April, 1917, has resigned his position as general purchasing officer to accept the management of the Maurer plant of the Barber Asphalt Company, at Maurer, N. J.

Mr. Browne was an extremely efficient factor in the rapid upbuilding of the Fleet Corporation's organization and is well entitled to the testimonial letter written to him by Mr. Piez, which is appended hereto:

"Dear Sir:

"I have learned with great regret that you have found it advisable to resign from the organization of the Emergency Fleet Corporation, and take this opportunity to express, on behalf of myself and the other officers of the Fleet Corporation, our very deep appreciation of your faithful and successful discharge of a very difficult position.

"Coming with the Fleet Corporation, as you did, at its very inception, you assisted, not only in the organization of the Purchasing Department, but you expanded this division so that it aided and supplemented the work of other divisions, the organization of which did not proceed with the same speed as the demands upon them. You can retire with a very certain feeling that you have contributed a very material part to the success which the Fleet Corporation has achieved.

"Very truly yours,

(Signed) "Charles Piez,

"Vice-President and General Manager."

The class certainly congratulates Browne upon his record with the Fleet Corporation.

The following information is gleaned from new addresses lately received:

George Hobson is now in France as a captain in the 305th Engineers.—"Tommy" Holmes is now in New York with the American Graphite Company.—Guy Hill is a captain in the army and is in Washington at present.—Ernest Smith is with the Halcomb Steel Company in Hartford, Conn.

Roger Willis Babb enlisted in navy in April, 1918. He was on the U. S. S.

"Old Colony" at the time of the explosion in Halifax; this ship was used as a hospital ship. Later he was transferred to the U. S. S. "Casco," and on the second trip to France received serious injuries, a fractured head, the loss of his left eye, as well as other minor injuries. He was invalided home and is now boarding at 134 Huntington Avenue, Boston, Mass.

Arthur W. Talbot, local correspondent of the Boston "Post" and for twelve years on the staff of the Providence "Journal" and the "Evening Bulletin," died December 21 at his home, of pneumonia that followed a week's illness from influenza. He was in his thirty-fifth year.

The funeral was held Monday afternoon at his late home, 114 Lenox Avenue. The Rev. R. D. Hollington of the Mathewson Street Methodist Episcopal Church officiated.

Mr. Talbot was born in Cambridge on October 28, 1884, the son of Emory H. Talbot, for forty years a prominent Boston newspaper man, and H. Virginia Talbot. He was the grandson of the late Micah H. Talbot, who for sixty years was pastor and presiding elder of Methodist Episcopal churches in Massachusetts and Rhode Island.

He was graduated from Mechanic Arts High School and for a time attended the Massachusetts Institute of Technology until illness caused him to abandon the course. He joined the staff of the Providence "Journal" in 1906, and while working there took a special course at Brown University.

Mr. Talbot was the founder and president of the Pen and Pencil Club. He served as an officer in the Providence District Nursing Association and was state director of publicity for the food administration. He was an ardent outdoor sportsman, his chief hobby being woodworking, in which he was very proficient.

For twelve years he was night editor of the Providence "Journal," and did correspondent's work for the Boston "Post," Boston "Advertiser" and Boston "Globe." For the past eight years he covered politics and the Rhode Island State Legislature for the "Journal."

In June, 1910, Mr. Talbot was married to Helen A. Davis of Baltimore, Md. He is survived by his wife and two children, Marjorie Talbot, seven years old, and Robert Emory Talbot, two years old; by his father, Emory H. Talbot, who has been attached to Boston newspapers since 1874; his mother, a brother, E. D. Talbot of Boston, and a sister, Miss Ethel Talbot, who lives with her parents in Dorchester.

Jorge Lage died October 20, 1918, from influenza; word was received at the REVIEW office January 8, 1919.

1907

BRYANT NICHOLS, Secretary, 10 Grand View Road, Chelsea, Mass.
HAROLD S. WONSON, Assistant Secretary, 370 Blair Road, Washington, D. C.

During the past few months Charlie Allen became the father of a third child.—John P. Chadwick is with the American Smelting and Refining Company, Casilla 35, Antofagasta, Chile, South America.—Emory Leon Chaffee has been appointed an assistant professor of physics in the new Harvard Engineering School.—Herbert L. Fletcher is an engineer with the A. B. Lee Elevator Company, with office at 111 Devonshire Street, Boston, Mass.

Some address changes are: John F. Johnston, Jr., 2232 Ward Street, San Francisco, Cal.—F. C. Jaccard, 1008 West Broadway, Butte, Mont.—Edward F. Kelly, 30 Boylston Street, Jamaica Plain, Mass.—Harold C. Libby, Littleton Common, Mass.—Herman W. Mahr, Bradfield Avenue, Roslindale, Mass.—Charles F. Runey, 49 Fairmount Street, Belmont, Mass.—Carl J. Trauerman, 132 East Aluminum Street, Butte, Mont.

The sympathy of the class goes out to Kenneth Moller, on account of the death of his wife on December 16, 1918, from influenza. Kenneth himself has been in government employ in New York City, as chief of the manufacturing branch of the clothing and equipment division, with the rank of major.—James G. Moore is now connected with the engineering department of the Truscon Steel Company, Youngstown, Ohio.

We record with real sorrow the death of the wife of Donald G. Robbins, in the fall of 1918, of influenza. Don has left Boston and is with the Congoleum Company, Marcus Hook, Penn.

"The Tech" of October 16 prints the following sad news:

> Oric Bates, son of the late Arlo Bates, the writer, and noted himself as an archaeologist, died from pneumonia on October 8, at Camp Zachary Taylor, Louisville, Ky., where he went late in September. His father died on August 24 of this year.
>
> Oric Bates was born in Boston on December 5, 1883, the son of the late Arlo and Harriet (Vose) Bates. He was educated in private schools in this city, to prepare for Harvard, and from there was graduated with the class of 1905. The following year he was placed in charge of the Egyptian department at the Boston Museum of Fine Arts and remained there for about a year, when he went to the University of Berlin for a year.
>
> This in turn was followed by explorations in the Nubia Expedition of the Khedival Government, the Harvard Syrian Expedition and the Harvard University Museum of Fine Arts Egyptian Expedition. This was in 1908, and the following year Mr. Bates led the Tripoli Expedition, and one into Nubia in 1910, and then for a year he explored the Libyan desert. He later was in charge of an expedition to Sudan, which was followed by still further exploration of the Libyan desert.
>
> On returning to the United States Mr. Bates became curator of African ethnology, Peabody Museum, Harvard University, and he continued there until entering his country's service. He was a member of the Royal Geographical Society and of the Stylus, Signet and Colonial clubs. He was the author of "The Eastern Libyans."
>
> When Professor Burton issued his call for assistants to care for the School for Deck Officers that he was caring for, for the United States Shipping Board, Mr. Bates came forward and later was the director of the school. Although the work was very much in line with that for winning the war, he felt that something more active would suit him better, and going from the Institute he reported at Camp Zachary Taylor, and his death from pneumonia came within the month.
>
> On June 5, 1913, in Boston, he married Miss Natica Y. Inches, the daughter of Mrs. John Chester Inches. Mr. and Mrs. Bates then made their home at 31 Lime Street. Mrs. Bates survives her husband, as do two young sons, Manson and John Chester Bates.

The secretary had the real pleasure early in January of meeting in Boston, by chance, several of our classmates who live some distance away. The first was Clarence Howe, who with his wife, was at home in Waltham, Mass, for the holidays. Clarence has made good as a civil and consulting engineer, conducting his own office in Port Arthur, Ontario, Canada, where he now employs twelve men. He has recently been appointed consulting engineer for the Northern Pacific Railroad.—The same day, at the Boston City Club, Harry Moody appeared suddenly on the scene. Harry had had the influenza but had fortunately recovered fully. He is division manager for Westinghouse Electric Manufacturing Company at Philadelphia.—On January 3, Harold Wonson appeared unexpectedly at the secretary's office in Boston. Harold has had mighty interesting experiences in Washington and elsewhere as an officer in the supply end of the organization of our army, reaching the rank of lieutenant-colonel. He has been discharged, however, and on January 6 returned to W. H. McElwain Shoe Company, where he is to have a very responsible position.

On January 7, Sam Coupal met the secretary on the street in Boston. Sam is a consulting mining engineer, conducting an office of his own in New York City.—The secretary had a few delightful telephone conversations early in January with Mrs. "Stud" Leavell. As is to be expected, "Stud" has distinguished himself in France. His name appears in the list of those awarded the Distinguished Service Cross by the war department on January 8, as follows:

> Leavell, John H., captain, Company F, 316th Engineers.—For extraordinary heroism in action at Audenarde, Belgium, November 1, 1918. Captain Leavell led a patrol of four men on a reconnaissance of the city of Audenarde at a time when it was still occupied by enemy patrols and snipers, obtaining important data on destroyed bridges and locating materials necessary in repairing them. While on this errand Captain Leavell and his men encountered a German patrol three times their number, and in the combat which followed several of the enemy were killed or wounded and a spy was captured.

Herman Mahr is in the dyestuff department of the DuPont Powder Company in Wilmington, Del.

1908

Rudolph B. Weiler, Secretary, Care of The Sharples Separator Company, West Chester, Pa.

LeSeur T. Collins, Assistant Secretary, 70 State Street, Boston, Mass.

The first bi-monthly dinner of the season was held at the Boston City Club on October 8, with the following present: E. H. Newhall, E. J. Scott, E. I. Wells, E. J. Beede, A. W. Heath, S. C. Lyon, L. Mayo. This slim attendance was partly due to the "flu" epidemic.

The next bi-monthly dinner was held at the Boston City Club Tuesday evening, December 10, with the following present: E. I. Wells, F. T. Towle, E. J. Beede, E. H. Newhall, S. C. Lyon, A. W. Heath, S. F. Hatch, L. Mayo, H. L. Carter and L. T. Collins. The members spent the evening in exchanging personal experiences. Link Mayo has been engaged in buying material for Murray & Tregurtha, who have Government contracts for building flying boats and seaplanes. Beede is in the secret service, so had nothing to say.

In order to arouse greater interest in the bi-monthly dinners, now that the war is over and those engaged in Government work will soon be returning, a circular letter was sent by the resident secretary to all members on the Boston and vicinity mailing list, giving the name and address of every member on the list, with telephone numbers:

> As you all know, we have an unbroken bi-monthly dinner record, covering a period of ten years. This fine achievement has been due in great part to the regulars who have always been most dependable in their attendance at these get-together dinners. Now, we want more regulars, and to bring this about, I am sending to each member of the class in Boston and vicinity, a list of the names of the members of the class to whom bi-monthly notices are sent.
>
> I want each member of the class to preserve this list, and to take it upon himself not only to make every possible effort to attend this season's series of dinners but also to personally urge other members to do the same.
>
> As you all know, we have a ten-year reunion which is overdue. It may be advisable to have it this coming summer; but possibly not until the summer of 1920. In any event, we want to be prepared for the wonderful time which is coming to us. This can best be brought about by the closest union of the class members, and in no way can this be better promoted than by attendance at our regular bi-monthly dinners.

Your secretary met Leo Loeb for the first time in ten years on the December 13 excursion of the A. S. M. E. to the Aberdeen Proving Grounds, Aberdeen, Md. Leo is an officer of the Philadelphia Section and was so busy with arrangements that little time was left for exchanging experiences.

Herbert T. Gerrish is captain of 218th Engineers, Camp Travis, Texas.

Karl R. Kennison, supervising plant engineer at the recently completed concrete shipyard of the Emergency Fleet Corporation at Mobile, has been transferred to the office of the district plant engineer for the middle Atlantic District at Baltimore.

James H. Davidson is now Major James H. Davidson. He is detailed to take charge of the inspection, accumulation, storage, and disposition of all records of all organizations demobilized at Camp Lewis and is also appointed on a special board to determine the value of the stock and fixtures left in exchanges by outgoing troops.

The death is reported of Ernest G. Genoud on October 12, 1918, of the prevailing epidemic. So far as known this is the first death among members from the epidemic, and was received just as we go to press. Account of Dr. Genoud's work will appear in the next issue.

Lynn Loomis has been promoted to major in the Chemical Warfare Section. F. K. Belcher has been transferred from the Pusey & Jones yard at Wilmington, to William Cramp & Sons yard at Philadelphia.—1st Lieut. H. R. Calloway, F. A. R. C., 1985 Sedgwick Avenue, New York.

Jack Evans of Toronto, Canada, who for a period of several months was a prisoner in the German prison camp at Dulmen, Germany, is at present with the Pusey & Jones Company assisting Dr. Taylor in Service Department work.

Evans enlisted in the early part of the war with the Canadian Mounted Rifles. He took part in the battle of Ypres, Messines Ridge and Plug Street. After ten months' experience in the trenches he was wounded and gassed in the third battle of Ypres, June 2, 1916. He was taken prisoner in this same battle. His battalion which went into the battle with a fighting strength of one hundred, was reduced to fifty-nine men.

After being taken prisoner Mr. Evans was taken through Belgium and put in the prison camp in Dulmen, Germany. He was sent to work in the coal mine known as the "Black Hole." After some time spent here, to use his own words, he "became tired of the abuse and poor feeding" and decided to get out. After four attempts he got away to Holland and through that country back to the Allied lines. Since that time he has gained thirty-five pounds in weight. Since his return Private Evans has written a book, "Out of the Jaws of Hunland," in which, in his own way, he depicts the abuses and terrors of German prison life.

New Addresses

Capt. William B. Given, Company N, 165th Infantry, Rainbow Division, Room 3036, 120 Broadway, N. Y. C.—Lieut. Harold E. Weeks, 131 S. 1st Avenue, Mt. Vernon, N. Y.—Major Laurence T. Walker, 230 Main Street, Stoneham, Mass.—Joseph H. Sinclair, 72 Lorimer Street, N. Y. C.—Capt. Desaix B. Myers, 304 Engineers, American Expeditionary Forces.—Ernest E. Kilburn, care Tide Water Power Co., Wilmington, Del.

1909

Charles R. Main, Secretary, 201 Devonshire Street, Boston, Mass.
George A. Haynes, Assistant Secretary, 530 Atlantic Avenue, Boston, Mass.

The class may well be proud of the record of its members in the great struggle which is being brought to a successful termination. Our records show that eighty-four of the men have been in active military service, and doubtless there are many others who have been engaged in work directly or indirectly connected with the Government. As soon as space permits, we shall print the complete list of men serving with the colors. If any have not already reported this fact, please do so at an early date.

It is with deep regret that the secretary reports the death of the second member of the class to die in service, Capt. Ernest A. Ware. He was a member of Company B, 506th Engineers, Service Battalion, and died of pneumonia at Bordeaux on October 11, 1918. He was buried with military honors in the Tallance Cemetery, Bordeaux, France. The secretary has extended the sympathy of the class to Ware's parents, who live in Somerville, Mass.

Last month, the secretaries took it upon themselves to get out a Christmas greeting for the class, which was sent to all the boys in service.

Word has been received from Lieut. Craig Ferguson, Ordnance Department, A. E. F., Siberia. Correspondence should be addressed to him, care Baker Loan and Investment Co., Walla Walla, Washington.

A very interesting letter came a few days ago from Capt. Arthur Shaw, 301st Engineers, A. E. F., telling about the St. Mihiel drive, in which his regiment participated. He says he would be mighty glad to hear from the fellows in the class.

R. W. Riefkohl is now a major in the 63d Artillery, A. E. F.

Miss Rebecca Thompson is in the drafting room of the Navy Yard at Washington, D. C. She holds the rank of Chief Yeowoman.

Lieutenant Herbert Jenness is now with the 63d Infantry Regiment, stationed at Camp Meade, Maryland.

Russell Nichols writes that he has been in an aviation training camp in Dallas, Texas, since last May, but the end of the war came before he received his commission.

Announcement has been made of the engagement of Capt. Henry R. Putnam to Miss Edith Nagel of St. Louis, Mo. Captain Putnam is now at Camp Humphreys, Va.

Mr. and Mrs. John N. Brooks of Douglaston, Long Island, announce the birth of Elizabeth Blackwell Brooks on November 16, 1918.

The class is still holding its bi-monthly meetings, usually on the second Wednesday of the odd month. Last month ten of the fellows got together for a quiet but enjoyable evening at the Walker Memorial. Letters were read from some of the boys in service. The next dinner will be held in January.

1910

Dudley Clapp, Secretary, Box 1275, Boston, Mass.

J. A. Torralbas writes the editor concerning his late brother:

This is to advise you that my brother, Mr. Rafael J. Torralbas, lately of Santa Lucia, Cuba, and of this city, at the above address, died in this city on September 26, after a short illness due to an infection contracted while directing the extensive railroad and bridge works which he was making for the Santa Lucia Company.

He was a Tech alumnus, class 1909 or 1910, and had worked up a good reputation in this city up to last year, when he accepted from the Santa Lucia Company the position of technical director of extensive railroad and bridge building and port improvement which they were carrying out on their property, the second largest sugar mill of this country.

The newspapers of this city and his native city, Sancti Spiritus, have written most laudatory articles on his death, and I am writing you in the hope that you will convey the information to the Institute and alumni of the same.

From "Town and Country," New York City, of December 20, is the following:

SIMMONS. August 12. Capt. Frank R. Simmons, "in active service," born in Providence and well known in Paris and New York. Mr. Simmons graduated from Yale in 1907, studied architecture at the Boston Tech and went to Paris to continue his studies. Later he abandoned architecture and began working in oils and water colors. Then came the war. He was one of the organizers of the American Committee Ecole des Beaux-Arts, through which former Americans of the school assisted French students who had gone to the front and their families. In the winter of 1916-1917 he was associated with Mrs. Edith Wharton in work related to convalescent homes. In March, 1917, he was asked to become one of the civilian members of an American military committee that went to Paris headed by Major Churchill. He was considered very valuable because of his deep knowledge of the French people and his gift in being able to draw French and Americans together in a bond of understanding. A system of "intelligence" on which depended the effective ensemble of different nationalities, manners and customs, was evolved and he was accredited with valuable work in this regard. A poilu remarked to an American journalist abroad: "Les Americains peuvent facilement s'entendre avec les Francais!" (The Americans are easy folk to work with.) Mr. Walter S. Ball, the journalist to whom he spoke, wrote later: "A part of all he had in mind was unknowing tribute to Ronald Simmons, of Providence." Captain Simmons leaves a wife, Mary E. Simmons, of 102 Lloyd Avenue, Providence, R. I.

H. E. Beebe of Ipswich, S. D., writes as follows:

On Wednesday night, with the aid of a Ford truck and ten willing boys, I helped pile up the available winter's supply of kindling of all the stores in Ipswich, and the residents adjacent thereto, in front of the Opera House. In spite of the snow falling heavily a barrel of kerosene helped the bonfire to be a roaring success. The Kaiser was burned in effigy with a shot gun salute that lasted over a half hour. On account of influenza no school, churches or public meetings of any kind have been held for a month, but there was a crowd out for this, and, apparently, no ill effects have been seen, although a few people of German ancestry looked rather sick. Of course, the next morning the placards over town, "Germany's Laid Down" looked premature, but we kept them up and it looks as if it were all over today except the trial of the criminals and a few cities laid waste in Germany as a sample of Kultur. Nothing like trying the broth out on the cook.

The job of chairman for this county for the Fourth Liberty Loan was gently laid at my door—a good sized package of $350,000. There are a few Schumachers Schmidts, Villhaiers and other Irishmen who have not yet surrendered their grasp on the eagle's tail feathers. They are being led before the Council of Defense and assessed twenty-five to fifty kopecks each for the Red Cross, and ordered to take the bonds or be thrown into the county Bastille.

I have endeavored in various and sundry manners to break into the army by waiving exemptions, etc., and may make the grade yet. Defective eyesight and a mean disposition seem to be the main drawbacks. The job of military governor of Berlin for the allies would probably be the right shaped hole as far as my disposition goes. If a German general complained that street sweeping made his back tired I would, with true German efficiency, refer him to report A23455-LX, stating the conditions that existed among the Belgians' or other civilians in the district formerly under his control, and ask the quartermaster to keep him supplied with new brooms.

E. L. Patch is assistant naval constructor in the navy yard, Mare Island, Vallejo, Cal.—Donald Adams French died October 4, 1918, of pneumonia, word was received January 7, 1919.

The following extracts from a letter written to Mrs. Sedgwick and the Technology Workroom by Mrs. Stuart, wife of Capt. Edward Stuart, of the Sanitary Corps overseas, shows that it is not always so simple a matter to get our supplies from the Workroom to the Technology Bureau in Paris:

> It seems that the clothes to go over to the Technology Bureau had quite a few adventures, Captain Stuart writes. He discovered that he would not be allowed to take the trunk, and so decided to put the contents in his large sleeping bag. The key wouldn't unlock the trunk, so it had to be broken open. He filled up a huge pasteboard box with socks and sweaters, etc., and was right in the middle of a busy street in New York when the bottom fell out of the box! Of course everything was scattered left and right and traffic was stopped until the things were picked up.
>
> I don't know how the rest of the transfer went on, but I imagine all right.
>
> On the way over Captain Stuart was taken ill with influenza and on reaching port was taken to a hospital, where he remained several weeks. He was very ill, but just escaped pneumonia. He grew very thin, losing twenty-five pounds. So thin, he wrote, were his legs that his puttees rattled as he walked. As soon as he was discharged he discovered that all his baggage was lost, and hunt as he could, he found no trace of it. One day he stopped at a little, tiny country station, and behold! in the corner was his baggage neatly piled up. Shortly after he reached Paris, and was able to deliver everything to the Technology Bureau.

Copy of a letter sent by Joseph Balch, Jr., to Mr. Gibbs of the Technology Bureau:

> November 25, 1918.
>
> Just a line to heartily thank you for a mighty generous package I received a short time back while in Verdun. We have been on the move continuously since then and I have delayed writing until just now, owing to an almost complete lack of time, and place, and facilities. I suppose I am the only possessor of a pair of pajamas in the whole division and they sure are a big convenience. Hope to be able to keep them to myself, and keep the "Cootie" family out, but there is nothing sure in this life, believe me.
>
> The rumors point now to a speedy return to the States for us, so that we will soon be back to the land of civilization where such comforts are the rule instead of the exception (I am referring to the pajamas and not the cooties). But in the meantime I will say your "Treasure Chest" is a godsend and many thanks for your generosity. Sorry I can't get into Paris but the C. H. Q. say "no," so I will have to be content.

1911

ORVILLE B. DENISON, Secretary, 63 Sidney Street, Cambridge A, Mass.

HERBERT FRYER, Assistant Secretary,
Room 506, 10 State Street, Boston, Mass.

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(Corrected to January 1, 1919.)

Name	*Course*	*Rank*	*Service*
AARON, J. A.	VI	Priv.	Adv. Ord. Depot No. 4, A.E.F
ALEXANDER, H. S.	II	Capt.	C. O., 92 Sq., A.S.S.C, A.E.F
ALTER, J. F.	IV	—	Inspector, Q.M.C.
ANDERSON, R. E.	III	—	O.T.S., Artillery
ARMS, J. T., JR.	IV	Ensign	U.S.N.R.F.
ATKINS, L. M.	XIIIA	Lt.Com.	U. S. N.
BABBITT, H. E.	XI	Capt.	Services of Supply, A.E.F.
BAILEY, F. R.	I	1st Lt.	301 Eng.
BAKEWELL, D. C.	II	1st Lt.	Inspector O.D., U.S.R.
BARKER, C. M.	VI	2nd Lt.	N. A., A.S.S.C.
BARTON, D. C.	XII	Priv.	Meteor. Serv., S.C., A.E.F.
BATES, S. E.	I	Priv.	U.S.N.A
BESSE, E. E.	II	Capt.	O.D., U.S.N.A.
BROOKS, A.W.	VI	Sergt.	2nd Btn., 3rd Engrs.
BROWN, H. C.	II	2nd Lt.	Hdqs. Co., 71st F.A., A.E.F
*BROWNLEE, M.B., Jr.	III	Priv.	M. G. Btn., 313 Inf., A.E.F.
BURDETT, PAUL	II	1st Lt.	C.A.C., Fort Revere, Mass.
CALDWELL, P. L.	I	Capt.	N.E. Dept., A.S.S.C.
CHAMBERLIN, O. V.	II	2nd Lt.	Amer. Ord. Base Dep, A.E.F.

Name	*Course*	*Rank*	*Service*
Churchill, H. W.	VI	1st Lt.	Insp. Gun Div., O. D.
Clark, Oberlin,	II	–	E.O.T.C. Demobilized.
Coburn, W. H.	I	Capt.	Gas. Def. San. Corps, U.S.A.
Cory M. M.	I	2nd Lt.	Hdqr. Det., A.S.S.C.
Cushing, R. W.	VI	Capt	Supply Purchaser, Eng.Corps
Davis, H. C., Jr.	VI	Major	O.D., U.S.A.
Davis, W. C., Jr.	I	2nd Lt.	Co. F, 305 Eng.
Devlin, J. J.	III	Capt.	Co. E, 301 Eng.
Dow, C. W.	I	—	Chief Inspector, Q.M.C.
Drake, Whitford	XIII A	Lt.Com.	Constr. Corps, U.S.N.
Edwards, C., Jr.	XIII	Capt.	46 F.A.
Foster, W. D.	IV	Sergt.	Camfl. Corps, 24 Eng., A.E.F.
Francis, R. D.	III	Sergt.	Co. E, 101 Eng., A.E.F.
Francis, S. A.	IV	2nd Lt.	F.A., U.S.A.
French, J. N.	IV	2nd Lt.	Army Avia. Det., A.E.F.
Frost, R. W.	I	—	G.P.B., A.E.F.
Fuller, J. C.	II	1st Lt.	C.W.S., Gas Def. Div.
Gaillard, D. P.	VI	Capt.	Nitrate Div., O.D., U.S.A.
George, G. C.	I	1st Lt.	Replace. Troops, E.O.R.C.
Gilcreest, O. J.	VI	1st Lt.	U.S.N. Air Forces, A.E.F.
Glazier, L. G.	VII	Capt.	Shell-Loading Brn., O.D.
Gould, R. H.	XI	2nd Lt.	A.S.S.C., A.E.F.
Grandgent, Louis	IV	Major	101 Inf., A.E.F.
Gravely, J. S.	V	Lt.Col.	U.S.N.A.
Greenan, J. O.	III	2nd Lt.	Hdqr. Co., 27th Eng., A.E.F.
Guthrie, S. A.	III	1st Lt.	346th M.G.B., I. O. R. C.
Hall, E. R.	II	—	F.A., O.T.S.
Hall, H. W.	IV	Capt.	Co. D, 343 Inf.
Hanson, R. T.	XIII A	Lt.Com.	Constr. Corps, U.S.N.
Harrigan, L. J.	XI	—	U.S.N.R.F., A.E.F.
Harrington, C. H.	I	Priv.	Co. F, 301 Eng.
Harrington, F. C.	I	Capt.	Ord. Depot. Q.M.C.
Harrington, J. F.	VI	–	F.A.,O.T.S.
Harrington, Joseph		–	15th Training Camp Batt. F. A. O. T. S. Camp Zachary Taylor, Ky.
Hart, J. P.	VI	Ensign	U. S. N. Elec. School, Navy Yard, N. Y.
Herlihy, J. A.	II	Capt.	Transp. Sect., A. S.A.E.F.
*Herrick, W. F.	II	1st Lt.	Army Avia. Det., A.E.F.
Hodgman, W. K., Jr.	II	2nd Lt.	Amer. Ord. Base Dep. A.E.F.
Hugelman, John R.	I	—	U.S.N.R.F., Safety Engr., Portsmouth Navy Yard
Jenkins, D. J.	III	—	27th Mining Engrs.
Jewett, F. C.	I	Q. M.	U.S.S. "Nebraska"
Johnson, C. R.	X	Major	Gas Def., San. Corps., A.E.F.
Judd, M. H.	I	—	U. S. N. R.
Kenney, G. C.	I	1st Lt.	91 Aero Sqdr., A.E.F.
Kenway, E.	I	1st Lt.	C.O., 83 Aero Sqdr., A.E.F.
Kerr, C. P.	II	1st Lt.	AeroEng.Div.,A.S.S.C.,A.E.F.
Killion, T. S.	III	2nd Lt.	329 Labor Btn. A.E.F.
*Kimball, S. P.	VI	2nd Lt.	U.S.N.A., Camp Upton, N.Y.
Kinney, M. C.	IV	1st Lt.	R.A.F., British E.F.
Knox, H. G.	XIII	Lt.Com.	U. S. N., Constr. Corps
Lathrope, T. R.	VII	—	San. C., Ancon, Canal Zone
Lawton, S. R.	V	Capt.	San. Corps, U.S.N.A.
Leary, A. F.	XI	–	F.A., O.T.S.
Letton, H. P.	XI	Capt.	Co. C., 111 Eng., A.E.F.
Lord, H. S.	II	1st Lt.	Hdqrs. Dept., U. S. Eng.
Lord, R. H.	VI	Capt.	O.D., U.S.N.A., A.E.F.
McAllen, J. L.	III	1st Lt.	Co. B, 602 Eng., A.E.F.
McCune, W. R.	II	1st Lt.	O.O.R.C.
MacKenzie, J. D.	III	1st Lt.	185 Cape Breton High, B.E.F.
Magrath, C. B.	II	Capt.	Canadian Inf., B.E.F.
Manley, H. L.	I	1st Lt.	110 Mobile Ord. R. S, A.E.F.
Merrill, C. H. S.	I	Priv.	Hdqr. Det., 39 Eng., A.E.F.
Moore, F. A.	II	2nd Lt.	4th Prov. Regt., F.A., U.S.A.
Morrison, I. F.	I	1st Lt.	Div.Hdqrs., 4 Am.Tr.,A.E.F.
Morse, R. E.	VI	2nd Lt.	209 Field Sig. Brn.
Nagle, Arthur R.	I	—	F. A. O. T. C., C. Tay., Ky.
Nealey, J. B.	I	Sergt.	Bat. A, 346 F.A.
Ofensteub, C. L.	I	—	U. S. N., Exper. Aero. Engr.
Parker, T. B.	I	1st Lt.	34 Eng., 78 Div., A.E.F.
Patrick, L. A.	IV	Sergt.	102 Mach. Gun. Btn., A.E.F.
Perrin, L. W.	I	Capt.	301 Inf., A.E.F.
Powell, O. D.	XI	Sergt.	309 F.A., U.S.N.A.
Pray, I. R.	V	Sergt.	Co.B, 1st U.S. P., A.E.F.
Prentiss, N. N.	I	–	A.S.S.C.
Ranger, R. H.	VIII	Capt.	F.A., U.S.A., A.E.F.
Rhoades, W. G.	VI	2d Lt.	63 Inf., Praesidio, Cal.
Richardson, W.	IX	Seaman	Co. B, N.R.T.S.
Richmond, C. G.	I	1st Lt.	602 Eng., A.E.F.
*Rideout, P. A.	I	2nd Lt.	30 Eng., Gas Regt., A.E.F.

Name	*Course*	*Rank*	*Service*
Roberts, W. L.	XIII	—	Constr. Corps, U. S. N.
Romer, J. B.	V	Chief Insp.	O. D., U. S. A.
Russell, Frank, Jr.	II	1st Lt.	Ord. Insp. Amm. and Small Arms Sect.
Russell, Foster	II	Priv.	A.S.S.C.
Schmidt, S. M.	IV	1st Lt.	Red Cross
Scribner, S. H.	I	Sergt.	14 Eng., R.R. Corps.A.E.F.
Seaton, R. A.	II	Capt.	O.O.R.C.
Shenstone, O. H.	I	2nd Lt.	R.A.F., British E.F.
Smith, W. L.	IV	1st Lt.	Hdqr. Co., 55 H.A., C.A.C
Snyder, H. R.	IV	P. M.	Commissary Dept., U.S.N.
Soule, H. G.	III	1st Lt.	A.S.S.C.
Spalding, S. P.	III	Capt.	O.D., C.A.C., U.S.A.
Stamper, W. Y.	I	1st Lt.	Co. D., 307 Eng.
Strong, C. R.	IV	Sergt.	Constr. Div., U.S.A.
Sutherland, C. H.	I	1st Lt.	517th Engrs., A. E. F.
Thompson, M. R.	XIV	Priv.	C.W.S., Gas Def. Div.
VanHovenberg,H.W.	XI	1st Lt.	U.S. Pub. H'lth Service
Vining, R. E.	III	2nd Lt.	Co. D, 303 Eng.
Wade, N. S.	II	Ensign	U.S.N.R.F.
Walker, R. T.	IV	Priv.	Co. H, 40th Eng.
Wardwell, A. K.	I	—	C. B. M., U.S. Ensign Sch.
Warner, W. W.	I	Priv.	6th Co., C.A.C., U.S.A.
Watts, Lawrence	I	Capt.	C.A.C., U.S.A.
Weeks, L. B.	XI	Capt.	Mine Planter, A.E.F.
Wells, R. B.	II	–	U.S.M.C., A.E.F.
Wells, R.D.	VI	Capt.	Insp.Sect.. Equip Div.O.D.
Wheeler, T. L.	X	Capt.	C.W.S., Gas Def. Div.
Whitcomb, E. J.	X	1st Lt.	O.D., Raritan Arsenal. N J.
Williams C. S.	II	Capt	Infantry, U.S.A
Wilson, I. W.	XIV	Major	San Corps, U.S.N.A.
Wood, H.	IV	Lt.	54th Art., C. A. C., A.E.F..
Wood, Henry	IV	–	O.T.S., Fortress Munroe, Va.
Wood, R. O.	VIII	Ensign	U.S.N. R.F.
Woodruff, J. C.	X	Major	San. Corps Gas Def. Div
Yereance, A. W.	I	2nd Lt.	Co. F., 305 Eng.

*Died in the Service.

Through the courtesy of the Editor your secretary is enabled to reprint on these pages for permanent record a corrected version of the 1911 Honor Roll originally chronicled on the blotters sent out the first of December. At this writing, the shortest day of the year, the list of stars has risen to one hundred and fourteen, the newcomers being Oberlin S. Clark, II, and J. F. Harrington, VI. "Clarkie" was drafted last March, spent a month in the Depot Brigade at Camp Devens, Mass., and was sent to Camp A. A. Humphreys, Va. After five months there in charge of the drawing-room of the "Mechanical Construction School," he attended the E. O. T. S. there for two months, or until demobilized on Thanksgiving Eve. He now has a job with the Central Construction Company, Pawtucket, R. I., the job itself being at Mechanicsville, Conn.—"Joe" Harrington says only the signing of the armistice kept him from having a commission, for he was sure he was going to "come through" at the close of the 15th Training Battery F. A. O. T. S. at Camp Zachary Taylor, Ky., from which he was demobilized in November after three months of training.

The following clipping from the Boston "Transcript" of November 27 contains the sad news of the death of the fourth of our respected classmates to make the supreme sacrifice in the service of their country:

Malcolm Bruce Brownlee, Jr., a private of the Machine Gun Battalion, of the 313th Infantry, U. S. A., died on October 26, in France, from disease, his parents, Malcolm B. and Belle F. Brownlee of 6 Fuller Street, Brookline, have been advised. He was born on March 1, 1889, in Butte, Mont., and came East with his parents when young. He fitted at the Middlesex School in Concord for higher studies and then went to Technology. He did not remain to finish his course, however, but instead went to Hartford, Conn., to enter business life, and from there later went to Baltimore, Md., as manager of the Seaboard Electric Supply Company. His war service began the last part of April, this year, when he went to Camp Meade in Maryland, where he received his preliminary training as a soldier. He then was sent to France, where he arrived on July 15, since which time he had been in action. While at Technology he was a member of the "No. Six Club" and in Baltimore belonged to the Athletic Club of that city. Private Brownlee is survived by his parents, a brother, Lieut. James F. Brownlee, who is in service in France in the Ordnance Department, and by two sisters, Miss Edith Brownlee and Miss Corona Brownlee, of Brookline.

Certainly the heartfelt sympathy of his classmates is with his parents and family.

The day after the signing of the armistice the secretary received a letter from "Ned" Hall, II, written from the F. A. C. O. T. S., where he was just recovering from the "flu" and resuming his course as "candidate" for a commission. He said he enjoyed the course immensely and was hoping to be able to complete it and obtain a commission.—"Bob" Morse, VI, appeared on the blotter as a private, but in reality he is and has been for several months a second lieutenant.—"Jack" McAllen, III, wrote from France in October that his regiment, 602d Engineers, was at the front and that they got gas alarms two or three times a night, each time having to arise and don gas masks, all of which was a "damn nuisance," he said.—"Bob" Wood, VIII, is another "under-rated" service man, for he appeared on the blotter as a cadet, whereas in reality he was and is an ensign.

Speaking of "Write to Dennie!"—Norman S. Wade, II, wrote just after the armistice, saying that he had been in the Merchant Marine for a considerable time but at present was an ensign, U. S. N. R. F.—"Art" Leary, XI, had to undergo a surgical operation and lose three months' work to get into the army, but was finally rewarded by an accepted enlistment as private in 2d Co., C. A. C., Fort Banks, Winthrop, Mass.

Among the men who have registered at the Paris Bureau of the A. U. U. recently are the following 1911-ers: O. D. Powell, R. W. Frost, J. O. Greenan, O. J. Gilcreest and Edward Kenway.

Perhaps the 1911 dinner held on the 11th day of the 11th month may best be described by reprinting the following from The Tech of November 16:

> Monday, the 11th, the class of 1911 held its class dinner at the Boston City Club. Owing to the excitement caused by the signing of the armistice, the attendance was small, but as Dean Burton remarked, those present made up for this with the noise of their celebration. Dean Burton and eight men of the class of 1911, viz., S. B. Dyer, II, H. G. Jenks, VI, A. H. Kaufman, X, W. J. Pead, Jr., VI, D. J Smith, V, E. D. Van Tassel, X, F. A. Wood, II, and O. B. Denison, VI, secretary, formed the party.
>
> Throughout the evening Dean Burton told of the new conditions at the Institute in his characteristically intimate way. Every one was anxious to hear of the activities at Technology. The Dean also explained the novel, interesting and instructive course in "War Issues" now being taught.
>
> Originally planned by the secretary for the 11th day of the 11th month, the evening took a new significance when it was brought to the attention of his classmates by the secretary that hostilities ceased at the 11th hour of the 11th day of the 11th month, and that there were strangely enough one hundred and eleven stars in the 1911 Service Flag.
>
> Instead of breaking up at 10 o'clock the boys left the City Club in cars owned and driven by "Ted" Van Tassel and "Bill" Pead, and joined in the merry-making up and down Tremont and Washington Streets until a late hour.

Come Eleven!

Philip Stearns Avery, IV, is working on the United States Government housing work at Bath, Maine, in a civilian capacity. In addition to his duties as assistant to the builders he has been in charge of the commissary and barracks, feeding over two hundred at a meal and having between four and five hundred in the barracks.—"L-C" Cooley, X, has been making ether and redistilling alcohol at Nitro United States Government Experimental Plant "C" at Charleston, W. Va.—H. L. Robinson, I, in addition to his engineering duties at the Crompton & Knowles Loom Works, has been assisting the fuel commission in Worcester, Mass.—Royal Barton, VI, recently wrote the secretary, saying he had received a long letter from Bala Pershad Mathur, also Course VI. Mathur has been engaged chiefly in telephony in his native country, India, since his graduation from the Institute.—"Mike" Greenleaf, VI, writes that everything "goes swimmingly" with him in Detroit. He had planned to be in Boston in mid-December, but for some reason did not come.

L. O. Mills, VI, is a civilian inspector with the Signal Corps, and on several occasions has visited the Simplex Wire and Cable Company's Cambridge plant, where the secretary is employed. He's still single, he says.—Not so with "Larry" Odell, VIII, for he and Mrs. Odell are receiving congratulations on the birth of a daughter, Alice B. Odell, on November 27, weight seven pounds, two ounces. Many hearties, Larry! The proud father is crude rubber manager for the Goodyear Tire and Rubber Company in Akron, Ohio.—"Don" Stevens, II, reports, as did "Larry" Odell, that business is humming with the Goodyear Company. He also informed the secretary that C. R. Johnson, X, was now overseas and a major, and that Captain "Bill" Coburn, VI, XI, is stationed at the Goodyear plant, both of them in the Gas Defense Service. He also stated that Karl Kilborn, II, experimental engineer at the Goodyear plant, has just recovered from the "flu," and that B. Darrow, VI, is developing pneumatic truck tires and aiding transcontinental motor truck test trips.

O. W. Stewart, I, has ceased working on his dollar-a-year job with the fire prevention section of the War Industries, and is now back with the Manufacturers Mutual Fire Insurance Company in Providence, R. I. He writes that H. E. Lake, I, has been temporarily with the National Board of Fire Underwriters, advising on fire protection for navy projects on shore. Lake recently sent in his class dues from his home in Wilmington, so doubtless is back from his Government work.—E. M. Symmes, V, is now with the Hercules Powder Company in Wilmington, Del., being no longer out among the Mormons at Bacchus, Utah.—A. O. Wilson, I, is now general superintendent of the Smith Iron Works Company in Chelsea, Mass.—E. M. Young, I, writes that the $10,000,000 Picric Acid Plant at Brunswick, Ga. at which he has been working, has been completely shut down, and he expects to be back in the Hub in the very near future.—Any new development in the process of correction of the Honor Roll or the chronicling of pertinent class news will be taken care of in the postscript notes to be written a little later.

CHANGES OF ADDRESS

Lieut. Charles M. Barker, 26 Glenarm Street, Dorchester, Mass.—Kester Barr, 154 Highland Avenue, Buffalo, N. Y.—Norman De Forest, 17 Madison Avenue, New York City.—Sergt. Russell D. Francis, Box 84, Cochituate, Mass.—Herbert Fryer, Room 506, 10 State Street, Boston, Mass.—Lieut. Oscar J. Gilcreest, 155 Church Street, Schenectady, N. Y.—Lieut. James O. Greenan, 766 Calmar Avenue, Oakland, Cal.—Kenneth Greenleaf, 452 Taylor Avenue, Detroit, Mich.—J. F. Harrington, State Tax Department, Albany, N. Y.—Isaac Hausman, 222 Sycamore Street, Toledo, Ohio.—Lieut. Thomas S. Killion, Company D, 329 Labor Battalion, Railhead Office, Bourmont (Haute Marne), France.—H. E. Lake, High Street, North Wilmington, Mass.—Capt. Harry P. Letton, 1910 E Street, Lincoln, Neb.—Capt. Raymond H. Lord, 101 Capen Street, Dorchester, Mass.—Norman A. Lougee, General Electric Company, Consulting Engineering Laboratory, Schenectady, N. Y.—C. R. Perry, care of Colts' P. F. A. Manufacturing Company, Hartford, Conn.—Capt. Richard H. Ranger, 1st Corps Signal School, A. P. O. 703,

A. E. F.—W. J. Seligman, care of Hartmann Brothers, Inc., 80 Wall Street, New York City.—Hubert S. Smith, 16 West Street, Chatham, Ont.—Donald W. Spithgate, 722 Quincy Street, N. W., Washington, D. C.—Ernest M. Symmes, care of Hercules Powder Company, Wilmington, Del.—Maurice R. Thompson, care of Baltimore Copper Smelting and Rolling Company, P. O., Highlandtown Branch, Baltimore, Md.—Lieut. H. W. Van Hovenberg, Room 2, Foreman Building, Texarkana, Ark.—Ensign Norman S. Wade, 59 Irving Street, West Somerville, Mass.—Lieut. Henry Wood, 54th Artillery, C. A. C., A. P. O. 719, A. E. F.

1911 Postscript Notes

Lil' ole nineteen ditto is only four days old as your secretary transcribes these postscript notes, and to date approximately one-fifth of the class have answered the "bill-ydu" sent with the blotters. But then, Rome was not built in a day a. t. f. s. One more name has been added to the Roll since writing the original notes, the count now standing at one hundred and fifteen. J. P. Hart, VI, has been, and still is officer-in-charge of the electrical school at the Naval Operating Base, Hampton Roads, Va. His rank is Lieut.-Commder. (Ret.), U. S. N.—"Don" Stevens, II, has advised the secretary that H. S. Alexander, II, is now a captain and a member of the American Expeditionary Forces.—Charles Edwards, Jr., XIII, writes that he went to France as 1st lieutenant in the 307th F. A., and later was transferred to this country with the 46th F. A., with the rank of captain.—Through a newspaper error in reporting army orders, the rank of J. S. Gravely, V, appeared on the blotters as lieutenant-colonel, whereas his real rank was that of major. In a recent letter he made the following explanation:

> I was promoted from captain to major last January, and the New York "Times" published my name as a lieutenant-colonel, along with several others who were really majors.
>
> Last May I was urged by the Winchester Repeating Arms Company to return to my former position with them. After considering what I was doing in the Ordnance Department as compared with what I would do at Winchester's, I decided that it was my duty to go back and accordingly resigned my commission. The resignation was accepted May 11, 1918.

Gravely's address is now 127 Alden Avenue, New Haven, Conn.—Marcus A. Grossman, "A. B.", III, will complete his government work at the Bureau of Standards, Washington, February 1, and will go back with the American Vanadium Company, Bridgeville, Pa.—The Secretary recently had a breezy letter from Charles A. McManus, I, a former classmate, who graduated with 1912. He has been and still is doing engineering work for the Fore River Corporation, being at present in charge of the construction of a torpedo boat destroyer. He wanted to be remembered to "all the boys."—"Art" Leary, XI, I, writes under date of one-one-one-nine that he has just received his discharge from the army. . . . He got as far as the Officers' Training School at Fortress Monroe, when the armistice cut short his chances for a commission.—1911 visitors to the Paris Bureau, through November, included Lieut. O. V. Chamberlin, II; Lieut. W. C. Davis, Jr., I; Major C. R. Johnson, X; and Lieut. M. C. Kinney, IV.—The secretary bumped into Franklin Osborn, III, in the Cambridge tube the day after Christmas and had a nice chat with him en route to the Hub. He is still up in Canada and likes as well as ever, although the States look good when he's here, quoth he.—Our late classmate, Lieut. P. A. Rideout, I, has been awarded the Distinguished Service Cross posthumously, witness the following citation:

> 1st Lieut. Percy A. Rideout (deceased), 1st Gas Regiment. For extraordinary heroism in action at Clerges, France, October 4, 1918. Lieutenant Rideout made an

extended reconnaissance in advance of the outposts, fearlessly exposed himself to enemy machine-gun fire, and being several times knocked down by exploding shells. The information he secured was valuable to the infantry, giving them knowledge of the exact location of machine-gun nests. During the action this officer directed the laying of the smoke barrage from an exposed position, remaining at his station throughout the operation, in spite of severe shell and machine-gun fire, and continuing to display the highest courage, until he was killed by shell fire. Next of kin, Mrs. Helen P. Rideout, wife, 8 Armory Street, Springfield, Mass.

The class of 1911 may well be proud of such a member!—The following clipping is from the Boston "Globe" of December 13:

HONOR ROLL OF FIGHTING MEN IN 1911 TECH CLASS

A roll of honor of the one hundred and twelve members of Tech class of '11 who were in the military or naval service of Uncle Sam when the armistice was signed on November 11, has been issued in the form of a red, white and blue blotter for graduates and friends, signed "Dennie," which is the familiar title of Orville B. Denison of Cambridge, class secretary, and formerly Tech correspondent for the Boston "Globe."

The class total at graduation was four hundred and eighty-six, so the roll of honor contains twenty-three per cent. The names of those in service abroad are printed in red ink, the others in blue. To the names of four, M. B. Brownlee, Jr., W. F. Herrick, S. P. Kimball and P. A. Rideout, is affixed the star signifying that they have paid the supreme sacrifice. Mr. Kimball died at Camp Upton, N. Y. The other three were with the American Expeditionary Forces.

Mr. Denison will welcome any additions that fellow alumni may be able to suggest to him.

We have another classmate who has been awarded the Distinguished Service Cross, and who should it be but Lieut. George C. Kinney, I, witness the following citation:

1st Lieut. George C. Kenney, Air Service, pilot, 95th Aero Squadron, for extraordinary heroism in action, Jametz France, October 9, 1918. This officer gave proof of his bravery and devotion to duty when he was attacked by a superior number of aircraft. He accepted combat, destroyed one plane and drove the others off. Notwithstanding that the enemy returned and attacked again in strong numbers, Lieutenant Kenney continued his mission and enabled his observer to secure information of great military value. Home address, care of L. Gordon Glazier, 4 Egremont Road, Brookline, Mass.

Good for you, George, we knew you'd do something like that!

Blotters sent to the addresses the secretary has on hand for the following classmates have failed to reach them, being returned to the writer: A. W. Brooks, VI; A. W. Carney, III; O. V. Chamberlin, II; I. C. Creighton, II; A. T. Cushing, I; R. S. Damon, I; E. N. Fales, II; C. T. Greenleaf, II; J. C. Knight, I; S. H. Lawton, V; H. S. Lord, II; E. A. Nash, II; J. H. Scoville, IV; L. A. Stover, II; W. W. Warner, I; C. S. Williams, Jr., V; S. C. Willis, I; and A. W. Yereance, I. If you know where any of these boys are, and in fact, why not anyway — WRITE TO DENNIE!

1912

RANDALL CREMER, Secretary, 7 The Circle, Rochelle Park, New Rochelle, N. J.

Now that the war is successfully filed with the finished business and the stress of work has abated somewhat, there is no reason why we should not hear at once and often from the busy ones who have not been getting their eight hours sleep From now out no excuse will go, so flood the mails.

So many big things have been happening of late that we feel some regret that there is only a little to report in this number. Quite a few tail-enders got in under the wire with their commissions before the Hun quit, however, and we are still getting word at this late date from remiss classmates who had not previously reported themselves.

Dick Wallis writes:

> After a three years' stay in the great northwest, Minneapolis to be precise, I am now in Washington doing what I can to help lick the Boche. Unfortunately my draft board would not permit me to see active service so I am with the Construction Division, Engineering Branch, as an Expediting Engineer. Our particular section handles all of the ordnance projects such as depots, proving grounds, etc. The work is very interesting as I come in touch with a great variety of subjects, some of which I know something about and others about which I am learning.
>
> Among others I had a letter recently from Roger Davis. He is now a "City Father" to his old home town, Hartford, and I expect has grown very dignified.
>
> While in Minneapolis I became engaged to Miss Dorothy Harwood, so I consider my stay there a great success.

Congratulations Dick, keep it up now.

Bill Lange, at Camp Fremont, Cal., July 18, 1918, contributes the following:

> Since seeing you I worked for about a year and a half with the Snare & Triest Company, on the third tracking, the 3d Avenue Elevated.
>
> Then I worked for about a year with the Turner Construction Company, reinforced concrete factories. I left them May, 1917, to go to the Officers' Training Camp at Madison Banks, N. Y. Since that time I have been in the army, at present second lieutenant, Company C, 319th Engineers, the divisional engineer regiment that belongs to the 8th Division regular army.
>
> I spent about four months with the 306th Engineers, at Camp Jackson, S. C., leaving there last Christmas to come out here.
>
> Since seeing you several years ago another daughter has come to our house, making two. Mrs. Lange and both kids are with me here, living right near camp. We are all in good health and like it out here pretty well.
>
> I've been in the army now for about fourteen months and still haven't done anything but drill recruits. I've almost got to the point of getting tired of that. The 319th is ready to go to France any time now, and is a pretty good outfit, all of the men being volunteers and selected by ourselves from a big bunch of recruits. We don't know when we will leave here. It may be a week or it may be a year. We are so far from Hoboken that I guess the War Department doesn't know we're here at all.

Apparently they didn't remain long in ignorance there. I saw Bill about October 1, and he was sailing next day for France to build those proposed bridges over the Rhine.

This from Doc Sloan:

> I received your letter a few days ago after it had toured the country from the Army Aviation School, the Navy Aviation Detachment at Tech, and finally to the Curtiss Aeroplane Factory where I am stationed temporarily.
>
> You see it was this way. About last December I decided I would enter the service. I had used reams and reams of paper, yards and yards of typewriter ribbon and finally succeeded in convincing the Bureau of Navigation that I might be useful to the service.
>
> After I had almost given up in despair I received on the 12th of March an order to report for physical examination at the Boston Navy Yard. I could not get there any too quickly to satisfy me and after spending a whole day going through the numerous departments and signing my name not less than one hundred times, I was ordered to report at M. I. T., for the U. S. N. A. D. for ground duties.
>
> After I had completed the twelve-weeks course there, I was shipped to Buffalo with twenty others. Here we were put through an inspection school, getting practical work and ideas. We have just completed this course and took our four-hours final exam last Monday. I hope this will be my last exam forever.
>
> Last Tuesday I found out that I was recommended for a commission so will hang around Buffalo waiting for my commission to be ok'd from Washington.

Within two or three weeks I am to be stationed at Curtiss Garden City Plant of New York, and will be connected with the production end of the sea-boats.

So much for my career since I have been in the service.

I will first tell about A. Clifton Albee who has been in business with me for about two years. We started about two years ago on mostly nerve and very little money, and have been able to make both ends meet up to date, and, although the war may hamper us in the building line, we hope to exist until it is over.

Cliff has worked like a trooper putting not only all his energy and will power but mostly his nights and Sundays into the business. We specialize in excavation and concrete work and have built several oil stations about Boston. We will take anything up to $4,000,000. Oh! wait a minute, I got the ciphers too numerous, I mean $4000, and do you know we have the greatest rivalry with some of our largest competitors like Stone & Webster, Aberthaw Construction Co., Holbrook, Cabot & Rollins, etc., but sometimes we get a job.

I did see Applequest while I was at Tech, and he was in the Army Aviation School, but I do not know where he is located now. He probably has his commission by this time and is doing some important work.

Oh yes, Edgerton, the dear boy, was about two or three flights behind me at Tech, and was taking the ground officers' course.

Jonathan A. Noyes is district sales manager of the Sullivan Machine Co., Duluth, Mich. He has brought up a very nice family I hear.

With best wishes I still remain a sailor that does not sail, an aviator that does not aviate, but here is hoping I may fly although not a flyer. Future address: Curtiss Plant, Garden City, Long Island, N. Y.

Do not forget to write again when you are not looking for news.

Jerome Applequest sends the following from Swissvale, Pa.:

It was a real experience for me to be back at Tech. Instead of getting into classes at nine o'clock in the morning as in old 1912 days, we formed out in the quadrangle at 5.40, and no seconds A.M. corrected to longitude of Boston. At seven o'clock I had the pleasure of taking one of the M. I. T. rifles out for a walk. It may have been the same one I used to carry around in freshman drill; I can't say for sure, but judging from the weight of it, it was the same. After taking the twelve-weeks course (lengthened from the original eight week) I was commissioned second lieutenant in the Air Service and am at present located at the Union Switch & Signal Co., at Swissvale, Pa.

Haven't run across any '12 men around here yet, but if I do I'll pass on the word in case you have not reached them.

This from Tod Greenleaf, Savanna, Illinois:

Your recent tickler has just been received, which reminds me that something of the sort came in some time ago, but I put forth the alibi that at that time I was too busy preparing to offer my services to the Government.

Like the majority of others, although a trifle late, I, too, had the fever, and on August 15 entered the Field Artillery Central Officers' Training School, at Camp Taylor, Kentucky. I had often speculated on just what was meant by intensive training. Now I know. I am firmly of the conviction that an officer of field artillery must have a thorough working knowledge of everything from mopping floors to ballistics and conduct of fire, and accept my assurance that is a long cry.

After the signing of the armistice, we were given the opportunity of resigning if we so desired, but as there were but three weeks of the course remaining, most of us elected to see it through. On the 4th of December we emerged second lieutenants in the Officers' Reserve Corps and were returned immediately to civil life. Of course we regret we did not have the opportunity of going over, yet we take solace in the thought that we put in three and a half months of the hardest work I ever expect to do.

In company with fond wife, who did her bit by teaching school during my absence, I am returning to Rock Island, Ill., to resume my duties where I left off with the Henry W. Horst Company, general contractors. We are at present putting up workmen's houses for the Government, asthe Rock Island Arsenal is to be one of the large, permanent arsenals.

I occasionally hear from Vin Gallagher, as often as he hears from me I presume, who is ensign in the Naval Reserve and stationed at New Rochelle as assistant inspector of engineering material with the Johns-Manville Co. Have also heard from Bab Babcock, who is in Paris, and according to last report had received his commission as second lieutenant and was working on appliances for the Liberty Motor.

From Keb, Major Kebbon, still at Camp A. A. Humphreys, Va.:

I have not much news worthy of the term. I expect to remain in the service for several months more, at least as I have made a comprehensive plan for a permanent Engineers' School and Port here at Humphreys, which after much study and many readjustments has been approved by the Chief of Engineers and Secretary Baker. The money necessary to commence the actual construction has been made the basis of a bill to be presented to Congress soon, but with the present desire of that worthy body to retrench, I do not look for immediate results.

I attended a meeting of the Washington Technology Club last week, and greeted several of our classmates. Lieut. Frederick Shepard was there, Norwood Hall, Capt. "Bill" Makepeace, 1913, Lieut. Scully, 1913, Lieut. Henry Shepard, 1914. I went to the meeting with Doctor Dewey, who when called on for a speech, delivered a good one in his inimitable manner. "Ike" Litchfield also entertained us.

Lieut. Howard Cather called on me last Sunday in Washington, and is expecting daily to receive his discharge and return to civil life. "Buck" Doane is at camp in the Officers' Training School, having given up his very important position as government architect for the Philippine Islands in order to enter the service. He came up to the room last night and was much interested to hear about Technology affairs, especially the photographs of the great Reunion and the account of our class dinner at the Engineers' Club in Boston.

Life here at camp is not at all bad, for we are near enough to Washington, only twenty miles, to run in over the week ends, and we have a very comfortable Officers' Club here, and hold at least one dance a week. The Liberty Theater puts on fairly good shows, and horseback rides provide proper exercise over this rolling Virginia country.

Howard Clark writes from that small place "In France":

Until tonight I thought I was fixed for the winter as instructor at this school, Third Corps Engineer Section, but tonight I hear I am soon to move to a very good job in the water supply end of things, all through a little Tech acquaintance which I had.

On Saturday I was in Paris and attended the dinner (monthly) of Tech men at the Union. There were three of us 1912 there, and one 1913: Henry A. Babcock, Harold B. Davis and myself (1912), and T. J. Lough (1913). I had quite a visit with Babcock as he sat opposite me. I told him of your recent letter and he asked to be remembered to you, as did Davis. They all remembered Fox, too, who was over here with me in 1912. About twenty there, only one in civilian dress outside of Director Gibbs, and that one had been made a shave-tail that very afternoon, so it was quite service-like.

In this school I run across many Tech men whom I get interested in, keeping in touch with the Union, etc. We have quite a few engineers polishing them up. Am just back from ten days at the front, going over the newly captured territory, the most interesting trip I have had. Great stores left behind in their pell-mell rush to evacuate.

In returning I found some twenty letters (not from the same girl though), and am trying to clear up a few before I move.

Jesse Hakes writes us from 37 West Preston Street, Baltimore, Md., December 24, 1918:

My career since that eventful day back in the dark ages has been very uneventful. I stayed with the railroad game for two years and then digressed into manufacturing. By a combination of hard work and fortunate circumstance I have succeeded to the position of superintendent with the Baltimore Tube Co. During the past two years we have done our bit by operating as a one hundred per cent essential plant. Our main aid has been to the shipbuilding industries.

I have seen very few Tech men, I am sorry to say. David Guy is now living with his wife in Washington, D. C., and is engaged with the United States Geological Survey. I have just finished a letter to John Pettingell, who is now a second lieutenant in the Air Service in France. I met Hugo Hanson here in Baltimore recently. He was a major, and was engaged on mustard gas work.

This from Ralph Ferry, now superintendent of the Northern Aluminum Co., at Toronto, Canada:

I have now been in Canada nearly two years and recrossed the border several times and it always seems good to be in the good old U. S. A. again despite the fact I like Toronto and the Canadians.

Outside of the big Reunion in Boston the only '12 men I can remember meeting since graduating are Pi Cummings, VI, and Howard Cather, IV.

A week ago, I had the very pleasant surprise of having Pi wake me up in the morning. Pi was on his way with a friend to the north woods for a fishing trip. They had camped for the night at Oakville, a small place about twenty miles west of Toronto. The mosquitoes were so thick that as soon as it was light enough so that they could see what they were doing they got up and cooked their breakfast and started for Toronto. Arriving in town they looked in a telephone book for my address, and as the telephone book still contained my previous address, they went to that, and awakened the man who now lives where I formerly lived. This happened before six o'clock in the morning. They then found out where I lived and came around and got me out of bed.

Pi is still working for an efficiency engineering concern in New York. I think the name is Franklin and Benjamin, and is at present located in Detroit. I think the work agrees with him as he seems to be as jolly as ever, and is applying efficiency to his own affairs by taking a vacation in this day and age.

Tomlinson reports from Fort Munroe, Virginia:

John Hall was a first lieutenant in the Sanitary Corps, and was sanitary inspector at Camp Eustis, about thirty miles north of here on the James River, last summer, but I have not seen or heard of him in several months now. J. H. Cather was first lieutenant in a construction company of the Signal Corps and was stationed at Langley Field for a year. I saw him frequently at the Chamberlin last winter and spring, but have not seen him in some time now. Fred Loweth is still with the C. M. & St. Paul on track elevation in Chicago. He reports that railroad work isn't what it used to be. C. C. Jones left the St. Paul to go into private work in the spring of 1917, and I have not heard from him since. Some of the men that are still in Chicago can give you a lot more information about themselves than I can.

In the last two and a half years I've spent two years in the army, and I'm pretty near fed up on army life. I was down on the border with a militia engineer company in 1916 as supply sergeant; Jimmie Cook was a corporal in the same outfit, and when we got back to Chicago he promptly got married. He was with D. C. & W. B. Jackson, Harris Trust Building, Chicago. I stayed in the same militia outfit and was called out again in June, 1917, the company being sent to work on the construction of Camp Grant, Ill. I was then second lieutenant and was detailed as adjutant to the Constructing Quartermaster. I resigned that commission and went to the second training camp, entering the Coast Artillery section because there was no engineer section. On November 27, 1917, I graduated as first lieutenant A. R. C., and on September 13, 1918, I was promoted to captain, C. A. I've been here at Fort Monroe as an instructor ever since the training camp, and for the past few months have been assistant senior instructor in Orientation. At the time the armistice was signed we had forty instructors in our department and some three thousand students, who were graduating as second lieutenants of Coast Artillery at the rate of two hundred a week. Orientation sounds complicated, but it's nothing but surveying as applied to heavy artillery work. I expect to be here about another month and then to go back to civil life; if you know of any good jobs that are open, or are going to be open in the near future, please let me know.

The secretary had the pleasure of seeing Clarence McDonough and Ernest Nicholson the other day. Both were on to New York on combined business and pleasure. Nick has been making shells with the Aetna for the edification of the Boche, and Clara is still with the Foundation Company at Pittsburgh, building shrinkage pits for Uncle Sam.

Henry Otis appeared in the public eye not long ago. His "The Rigger" in the

October number of "Atlantic Monthly" is well worth the trouble of hunting up. Henry was in the Plant Engineer's office at the Fore River Shipyard most of last year, inspecting operating machinery. In October he enlisted in the Motor Transport Corps and went with the Mack Motor Truck Company as a mechanic just for the experience.

Rock Comstock is a chemist for the Brown Company, formerly the Burgess Sulphite Company at Berlin, N. H. He is now the proud father of two.

Justus Sanburn is now chief chemist for the Strathmore Paper Company at Springfield, Mass. He was married in 1915 to Miss Marion Hale, Wellesley, '13.

Carl Rowley is now with the American Fork and Hoe Company. He writes us from Cleveland, Ohio:

I have just become affiliated with a new line of work. Left the J. M. Co. on the first, and am now assistant to the president of this company. Most of my work will be on production and power plant engineering; as there are sixteen factories scattered pretty much all over from Oklahoma to New York, I'll be busy.

Arch Eicher was in town a few days ago, and is the same old chap as before he mixed it up in Europe. From all accounts he is still able to pass the ivory soap test.

The class baby and five months' old sister are well, and able to take the prize again if necessary.

R. F. Symonds writes from 1710 Market Street, Philadelphia, Pa.:

Will start off by giving you an address where you can always reach me, care New England Structural Company, Everett, Mass.

There is little to say about myself. My family, which now includes a boy and girl, three and one-half years and eight months respectively, is living in Boston. I have been in the service on this side the past twelve months and have floated around the country on the production of motor repair equipment. Like every one else, I am hoping for an early discharge.

Met J. M. Hargraves at a Tech luncheon in Cincinnatti last summer, also Lieut. E. R. Jackson, '11, in the same city. P. M. Wiswell, '10, is a captain in the C. W. S. stationed in Philadelphia. Have run across E. H. Schell several times. He is dividing his time, fifty-fifty, with Tech and Hog Island, and knows all the porters on the Federal by their real names. Met J. G. Russell, '13, at a Tech dinner in Philadelphia a few weeks ago. Saw Dave Benbow in Washington about a year ago, and believe he went to France with the American Ordnance Base shortly thereafter. He was a captain then and will guess at him as major now. The last time I saw Fritz Shepherd he was in Washington with a lot of hand grenades taken to pieces on his desk and trying to put them together. That was about a year ago and I don't know whether he has since blown himself up or not. I am under a Maj. F. C. Field, Tech '98, who was under Lieut.-Col. G. H. Hooper, Tech '91, before he came here. While some of these are of no particular interest they serve to show the extent to which Tech men have permeated national affairs in one little corner of the show.

Reiman writes us from 6 Marlborough Street, Boston:

You are right. Here goes.

I ought to go way back to 1912, because I have not sent in word of my doings at all. Moreover, I do not think that W. J. Murray has either. Since we spent the first four years after graduation together, let me speak for the both of us.

To begin with, we both went back to Tech as assistants (Murray with Professor Moore, I with Professor Fay), and spent a very profitable year. The following year we both returned with ratings as instructor (Murray with Professor Thorpe, I with Professor Spear).

Then the fun began. We put our trunks aboard the "Amerika" expecting to sail for Hamburg on the 1st of August, 1914. Of course many other things than that happened. We sailed on a little English boat and after a rather exciting trip arrived in Liverpool. We were trying to get to Zurich. At that time travelling was impossible, so we set about seeing England. We finally settled down at Leeds and worked at the University under Prof. J. B. Cohen, the Organic Chemical man. After eight months there we were able to go to Switzerland.

We spent a few weeks looking over the various universities, and finally settled down at Geneva. We both worked on a revision of the atomic weight of bromine. Of course you can consider that all settled from now on. At any rate we were finally awarded what we went after, D. es Sc degrees.

Of course there were other little things to do besides study all the time. We climbed all the mountains, even to Mt. Blanc (without a guide). We went everywhere in Suisse and the adjoining parts of France. And finally sailed home via Bordeau in late July, 1916.

We both started teaching again, Murray at Northwestern, I at M. I. T. During that year I studied a lot of Biology, Anatomy, Physiology and Physiological Chemistry. In the summer following (1917) I became associated with Mr. Louis A. Shaw (we had been studying together for a long time). We built a laboratory at 6 Marlboro Street, Boston, for Physiological Chemical Research and started in. Of cours about as soon as it was fairly started we turned it over to the Government, via Dr. W. K. Lewis, M. I. T. From then till now we have been working gas defense problems night and day. At one time there was a group of fifteen to twenty men responsible to this laboratory, all government men, most of them in uniform and all doing gas defense work.

This fall I did two other important things: (1) accepted a commission as captain C. W. S., U. S. A.: (2) married the best girl in the world, thereby renouncing Murray, my oft accredited wif' of many seasons. Cheer up!

Well now that the war is over I hope to soon be back with my beloved research at 6 Marlboro Street. And that address will probably be mine for some time to come.

In the summer of 1917 Murray worked with the Benzol Products Co., and later with the National Aniline Co. Then he went to Washington to make poison gases, and as I hear it, had a good bit of success. He is a first lieutenant C. W. S., U. S. A. I believe he has accepted a position as director of the new research laboratory of the Stanley Co., New Britain, Conn. He is again going to defeat Fritz by making honest to goodness American dyes.

Norman Fredricksen is also going to the Stanley Company, and will work with Murray.

Well, so long, I'll come across again next year.

Now that means this year, and the same thing applies to all of you. Make it this month like a good sport, and we'll have no kick coming.

Karl A. Funk, a structural engineer, who had been in the employ of the Government in Newark, N. J., died December 10 at the home of his sister, Mrs. Charles A. Ness, 115 Westbourne Terrace, Brookline, after a short illness of pneumonia. He was twenty-eight years of age, the son of Mrs. Annie Funk and the late Charles Funk of Brookline. Mr. Funk was born in Newton on January 2, 1890. He was graduated from the Brookline High School and from Technology in 1912, and later had charge of the construction of several buildings in Boston. For the past year Mr. Funk had been in Newark working for the Deslauries Aircraft Corporation, where he was in charge of manufacturing devices for the Government for aeroplanes, by which the operator could telephone to the ground. He returned to Brookline to spend Thanksgiving with his relatives, and it was then that he was stricken. He was a member of the Beth Horon Lodge, A. F. and A. M., and a member of the Brookline Baptist Church. He leaves a wife, who was Leah Rosenthal of Allston; his mother, a brother, George C. Funk, a Boston architect, and his sister, Mrs. Ness.

News of the death of Capt. Karl C. McKenney, December 20, was received by his parents, Mr. and Mrs. Lewis T. McKenney, 39 Chaske Avenue, Auburndale. Captain McKenney died in France October 30, from broncho-pneumonia.

He enlisted in August, 1917, attended an officers' training camp, was commissioned a captain in November, 1917, and attached to Battery E, 49th Artillery, C. A. C., at Fort Andrews.

Besides his wife, Mrs. Virginia Courtner McKenney, to whom he was married last February, and his parents, he leaves two younger brothers. He was a member of the Wellesley Lodge of Free Masons and a 1912 Tech man.

John L. Bray has been honorably discharged from the Engineers. His address at present is 16 Rutland Square, Boston, Mass.

Hugo Henry Hanson, X, is now major, C. W. S., U. S. A., with home address, 2643 South Huntington Avenue, Boston, Mass.

L. Hall Goodwin announces the birth of a son, Donald, on December 3, 1918, at 321 Harrison Street, Passaic, N. J. This is Mr. Goodwin's third child.

Announcement is made by Mrs. Walter L. Hill of 226 Massachusetts Avenue, Arlington, of the engagement of her daughter, Miss Marion Squire Hill, to Vernon Gregory Sloan, son of Mr. and Mrs. Charles G. Sloan of Littleton, formerly of Arlington Heights. Miss Hill is a graduate of Wellesley College, class of 1911, and is connected with the chemistry and research department of the Harvard Dental School. Mr. Sloan is a graduate of Massachusetts Institute of Technology, and is an ensign in the naval aviation service, Garden City, L. I.

The marriage of Harriet Rutherford, daughter of Mr. and Mrs. John Jewell Allen, to Capt. Clarence Kenworthy Reiman, X, C. W. S., U. S. A., son of Mr. and Mrs. Henry W. Reiman of Newburyport, was solemnized at the home of the bride's parents in Amesbury, Saturday. Captain and Mrs. Reiman, following a wedding breakfast, left on an automobile trip. The groom is engaged in important chemical research work.

CHANGES OF ADDRESS

George W. Richards, 1530 Frick Building, Pittsburgh, Pa.—Angus R. Hammond, III, 158 Lexington Street, Cambridge, Mass.

1913

F. D. MURDOCK, Secretary, 483 Crescent Avenue, Buffalo, N. Y.
A. W. KENNEY, Assistant Secretary, 3511 Lowell Street, N. W., Washington, D. C.

The engagement is announced of Miss Constance Cordelia Flood of Boston, to Lieut. Ralph S. Rankin, VI.

A. C. Cardinal, XI, is engaged to Miss Eleanor Agnew of Paterson, N. J.

The following marriages are announced:

E. F. Coleman, I, to Mary E. Tighe.—Mr. Charles Frederick Haglin, Jr., II, to Isabel Blackburn.—Mr. William Allen Bryant, I, to Ella M. Fowler.

With deep regret we write of the death of Geoffrey Rice Thayer, VI. It is true indeed that the good die young. For a downright, likeable, helpful fellow, Geoffrey had no peer. He had been married only a few months and was doing well in his profession when he was taken with the influenza, which was the cause of his death.

It is a pleasure to be able to print another good letter from Gene Macdonald, I, whose advancement from an enlisted private to captain please notice:

> I have just been reading your reprint from the July REVIEW and enjoying it immensely. Yes, course I ought to appreciate that little bit of pessimism from Harry. It is an element of I, '13. I appreciate all the other contributions, too, and especially Miss Rice's keeping in touch with the gang. It isn't every class has got such a loyal co-ed.
>
> Well, we are four months gone on our second year in France and we flash the double service bar on our left sleeve. Some of the boys flash one on the right sleeve, too, but not I. I'm always just a little ways off when they hit. I had the leg blown off my cot the other night, but that doesn't earn a wound chevron either. I was some fifty feet from the tent at the time, but I was further than that when the next two or three landed. Ten minutes later, the spasm was over and I was repairing the damage and preparing for bed. By the next morning that gun was either captured,

or beating it for Germany as fast as its wheels would turn, and we are following them right up with our specialty. It is real campaigning we are doing now, officers and all living in "pup" tents and eating off mess kits. Just my luck, when I was an enlisted man, the officers lived on pie, in houses.

This has been just a wonderful experience for me. We have traveled and traveled. Been behind and up to (occasionally beyond) all the fronts from Ypres to Lorraine, seen the Belgian, Portuguese, Italian, Algerian, Gurkan, Egyptian, Russian, French, British and German troops. To be sure, the only times any of our men have been beyond the front were more or less accidents. A couple of our officers ran right out into No Man's Land in a flivver one day near Fismes. The line was not marked in any way and they just rolled merrily along the road until machine gun bullets started to patter. Then they turned around and came back.

Had a revival of the good old stuff we used to work on in that little old office on the fourth floor of Engineering A. Eight structures to investigate for the extra heavy load they were contemplating. Luckily, I had the original figures in French. So after a week's hard labor with my little staff, I reported them all safe and just to show my confidence in my instructors rode the first load over.

How this army has grown since we first landed! We were curiosities then to French and Tommies alike. The Froggies took us for Australians or New Zealanders because of the similarity of hats. And when they found we were Americans, wanted to know what language we spoke at home. How that French language has changed since we lisped it, too. The French have obligingly altered the pronunciation so you hear about once in so often the exasperated Yanks remark, "Why, the damn fools don't even understand their language, themselves." And as for the girls — well that stuff is international.

But now, some of the Yank promises have materialized. You realize there is a third big army in the field, when you see train after train returning, loaded with Americans. A while ago I was in a section where some towns, four years in German hands, were taken by Americans. We certainly were a popular army there, engineers and all. And personally, though this war can't end any too soon, I'm as happy as ever. I'm traveling along up without any special deeds or merit. While a sergeant I took an exam for the Corps of Engineers, and my Tech degree which so many fellows have found valuable, and the regular army methods of advancement have landed me a captain to date.

George B. Sampson, II, is an inspecctor of ordnance for the Yale & Towne Manufacturing Company, Stamford, Conn

Bob D. Bonney, X, is chief chemist with the Congoleum Company, Marcus Hook, Pa. He notes:

I'm with a live, wide-awake company and trying my best to hold the pace or a little better.

There are lots of Tech men around here, but they never seem to get together. I'll bet if some live wire got their addresses and got up a Technology dinner, they couldn't get all the crowd into the dining-room.

I met Jerry Fallon (ensign) on the street in Philly the other day. He's at the aircraft factory at the Philadelphia navy yard.

About a month ago I met Roger Williams, V, down at Wilmington. He is with Du Pont.

M. W. Salomonson, IV, is with Monks & Johnson at Philadelphia, designing shipyards. Spaulding, X, was down here a few weeks ago.

I saw Bill Mooney, IV, a couple weeks ago. He's making a hospital of the Grand Central Palace at New York. There was a regular reunion of M. I. T. course V and X men, at the Chemical Exposition. It seemed as if most every one was there.

I won't bother you with any more news. Here's my dollar.

A. J. Pastene, X, is works manager for the Chemical Company of America, Inc.

Robert T. Portal, VI, is at Camp Hancock, Augusta, Ga.

Adolphe C. Cardinal, XI, at last stirred to action by exuberance over his engagement writes the following:

During the years of the war, I have remained on my regular job because my eyes kept me from every army and navy thing that I tried for, and even when my number came up in the draft, the eleven doctors on the medical advisory board voted me into class 5. However, I have held a secretary job for the industrial division of the War Fund Campaign, and also for the silk division of the Liberty Loans, which took quite a lot of time and work, but in both of which things we always put it "over the top."

During the past year I have been alone at the head of our Paterson mill, due to my father being very ill since March, at which time he underwent a very serious operation. I'm afraid that he will never recover his health again.

Of course I always read every word of our section of the REVIEW, and hope that some time in the near future '13 may get together again. From now on I suppose we shall hear many very interesting things about our friends who have been "over there." As my father is from Lyons, France, you may be sure the result of the war was more than ordinarily satisfactory to our family.

I run into some of the fellows in the New York Tech Club now and then, but the war has cleaned out most of the young ones of our class from that spot for the present.

If you ever get near the Big City, let me know, as I would like very much to see you, and if you care to see a smooth business, I can show you how fine silks are made.

Lester Hoyt, V, is the first man we have seen who has been able to get a vacation. He notes:

Have just recently returned from my vacation. Went back to New England for a look at some country that isn't all flat like this forsaken part of New York State. Had a fine auto trip up into Northern Maine and went deer hunting, when the season opened October 1. Was fortunate enough to bag a small deer the second day. Wish things were so arranged that I could try my luck at shooting Heinies Think I would enjoy that kind of skunk shooting.

I was in Boston Monday, October 7, and went over to the Institute, which I found a changed place in war time. The Freshman Class is expected to be very small this year, the upper classes practically nil, one of the profs. told me.

Have been and continue to be extremely busy at ——. Our chemical staff has been sadly depleted during the past few months, and I have had a lot of work to do in connection with government contracts for various kinds of soap, as well as considerable experimental work on some secret preparations for the Gas Defense Service. So I'm getting a share of "war work," even though still in no official capacity.

Philip S. Barnes, X, has received his commission as ensign.

Paul E. Rudolph, I, is a clerk with the army Motor Transport.

William G. Horsch, XIV, has been commissioned 1st lieutenant in the Chemical Warfare Service.

Arthur W. Carpenter, X, has been commissioned lieutenant and is with the San. Corps, A. E. F.

Allan S. Beale, I, has been commissioned as 2d lieutenant, stationed at the Aviation Concentration Camp, Dallas, Texas.

George R. Wallace, Jr., X, has been commissioned captain and is connected with the field artillery.

George W. Bakeman, XI, is now affiliated with Red Cross work.

Capt. Donald Neumuller, who has been in command of the 8th Construction Company, returned from overseas December 12, on the "Adriatic."

The following extract from a letter of Corp. Edward A. Hubbard, 55th Artillery C. A. C., A. E. F., has been sent to us by the Technology War Service Auxiliary:

Last night I spent in a dugout on the front, where there is most going on — right in the middle of everything — and tonight in "Gay Paree," — some change!

I went to the University Union and saw Mr. Gibbs. I got lots of things from him, and he was a wonder. Fixed me up in every way. Gave me a complete equipment, which was much needed, as I left our battery position with nothing but the clothes on my back. He said if I needed anything at any time, to let him know

I certainly appreciated all that Mr. Gibbs did for me, and the feeling of being "at home" that the Union gave me. It was fine to know that you had a real place to go. I had also much good food. Some contrast, a dirty dugout and army food one night, in Paris with a bed the next.

Alan H. Means is 2d lieutenant, 341 F. A., 155 Art. Brig., Amer. E. F., care Postmaster New York City.

David F. Baker is with the Blast Furnace Department, National Tube Company, of Lorain, Ohio.

Henry E. Randall died during the recent epidemic, in New York. Word received through Prof. R. R. Laurence, January 6, 1919.

Gardner R. Alden, X, is with the Conservation and Reclamation Division, care Depot Quartermaster, Atlanta, Ga.

Arthur Kenney in Washington managed to pull off a few little class dinners. At one of them Professor Tyler was their guest.

Indirectly, we learn that L. H. Lehmaier, III, who is now major in the Australian Army, was in Boston in connection with some sort of a drive in which Australian officers participated. We are glad to hear that he has come out safe, as he has certainly been in the thick of it. He was on a troop ship on the Pacific Ocean shortly after the declaration of the War, was at the Dardenelles and has been at the front in France since leaving that spot so disastrous for the British. He did manage to get time off to go to London to be married.

Mr. and Mrs. Charles H. Hopkins announce the birth of Jean Louise Hopkins on December 27.

1914

C. J. CALLAHAN, Secretary, 57 Wentworth Street, Charleston, S. C.

ELMER E. DAWSON, JR., Assistant Secretary,
28 Washington Street, Winthrop, Mass.

MR. LEON HUBERT WEBBER, '14, VI, S.M., '15
Born October 13, 1891—Died January 13, 1919

He was the son of Walter H. and M. J. Webber. He was graduated from North Brookfield High School in 1909, was three years at Worcester Tech, 190-912, two years at M. I. T., 1912-14, taking S. B. degree in 1914 and S. M. degree in Electrical Engineering in 1915.

He spent the year 1915-16 as Research Assistant in the Electrical Engineering Research Laboratory. He later spent some months with the Cumberland County Power and Light Co., Portland, Me., and during the period preceding his enlistment in the service was assistant to the Transmission Engineer of the New York Central Railway. He left this last position to enter the Naval Service in December, 1917, with the rank of ensign; recently he was promoted to the grade of lieutenant (j. g.) United States Naval Reserve Force.

Since entering the service he has been Naval Inspector of Ordnance, in southeastern district, covering the states south of Virginia to the Gulf and west to the Mississippi River. He has been inspector of naval ordnance and ordnance supplies manufactured for the Government in the United States for use abroad. He was stationed at Raleigh, N. C., from the time of entering the service, December 12, 1917, until March 29, 1918, when he went to Birmingham, Ala., where he died.

Funeral services were held at his home, 71 School Street, North Brookfield, Mass., Saturday, January 18, 1919, at 2 P.M.

A letter written by Mrs. George to "The Tech," December 17, 1918:

DEAR SIR: Earl Mortimer Newlin went to France as first lieutenant, Company C, 312 Machine Gun Battalion, 79th Division A letter received from his father by the War Service Auxiliary gives the following information:

"A letter written by Mortimer shortly after he was wounded will doubtless be of interest to you.

"'Address me now Base Hospital No. 6, A P. O. 705. It is a wonderful hospital right in the City of Bordeaux—a beautiful old college all done over and modernized by the Americans for hospital service—fine nurses and corking good nurses—excellent beds, food and care. There are so many of us now that we are in a ward, but ordinarily the officers have private rooms. I will have one soon, but like the ward best. There is a lot of company, and every one is cheerful and happy, and there is a lot of interesting talk. You see we are from many divisions, and divisions do not usually intermingle. I was hurt on the night of October 29—going out after a couple of my platoons that had been a little demoralized by shell fire (we were making a night relief), and just after I had gotten them all collected and all but two squads sent up into place, a fast 88 H-E, one known as a "whiz bang," burst right under my feet. The explosion didn't hurt me at all, didn't even knock me over, but a couple of little fragments slid up through the sole of my boot, slashed up my big toe and lodged back under the arch of the heel; some more bits caught me in divers places, one clean cut in the calf of the left leg, and one clean cut in the thigh of the right leg on the inside, both very minor wounds. One little piece buried itself in my left middle finger, one in my left thumb, one in my left thigh, just above the knee—I just found it was in there a few minutes ago—and the last one slid up my left temple. None of the hurts were at all serious. I was able to walk the quarter mile remaining to the gun positions with the two squads which were happily very near a first aid station, and my own command post.'

"Capt. Earl Mortimer Newlin arrived in New York the morning of December 3, the change in designation being very gratifying to us. He expects soon to be sent to the hospital at Fort Snelling, Minn., and to be able to spend his holidays with us here or in Minneapolis.

"The wound in Mortimer's foot still necessitates the use of crutches, but we hope the injury will not leave any permanent disablement."

Frederick P. Karns is captain, Co. F, 15th U. S. Engineers, A. E. F., France—John C. Potter, VI, is first lieutenant, Signal Corps, U. S. A., Headquarters Central Department, Chicago, Ill.—Harold W. Barker, IV, is lieutenant of engineers, at present in France.

From the Boston "Evening Record" of December 14, 1918:

One of the most popular officers in the United States Army, according to the many stories told by Dorchester men who have arrived home, is Capt. Edward Murphy of the Coast Artillery, a nephew of Superintendent of Sewers Edward F. Murphy, of 898 Adams Street, Dorchester.

Captain Murphy enlisted in the service as a private and worked his way up the ladder by hard work. On enlisting in March, 1917, he was sent to Fort Monroe, and later to Fort Revere as the senior officer. Still later he went to Fort Sam Houston. Although he tried hard he never was able to get across, which was his one ambition. He is a graduate of Massachusetts Institute of Technology.

Word has been received of the death in Savannah, Ga., early in week of December 16, of Robert Turnbull Gookin, son of Mr. and Mrs. James A. Gookin of 356 Seaver Street, Roxbury. Mr. Gookin was stricken with pneumonia, and died a few hours before his parents reached the city, where he had been engaged in government work for about two years.

Mr. Gookin was born in Dorchester, December 24, 1889, and was graduated from Massachusetts Institute of Technology in 1914. He was an instructor in chemistry at Tech the following year, and then went to Savannah to take charge of municipal milk and water inspection. He subsequently became chief United States government inspector at the American Sugar Refinery, Savannah.

In January, 1917, Mr. Gookin was married to Marie G. Hogan of Dorchester, formerly a Boston high school teacher. His survivors are his wife, an infant daughter, his parents and two brothers, Dr. Vincent A. Gookin and James Gookin.

Norman D. Macleod has been cited for bravery. The official announcement follows:

HEADQUARTERS 26th DIVISION AMERICAN EXPEDITIONARY FORCE
France, November 17, 1918.

GENERAL ORDERS
No. 102.

1. The division commander takes pleasure in announcing the award of the Distinguished Service Cross to the following named officer, Capt. Norman D. Macleod, 103d Field Artillery, for extraordinary heroism in action at Marcheville, France, 26 September, 1918.

While acting as artillery liaison officer, Captain Macleod displayed remarkable, courage and judgment under terrific artillery and machine gun fire. In addition to his duties as liaison officer, he volunteered and took personal command of a detachment of infantrymen who were without officers, and by his personal bravery and resourcefulness successfully withstood a violent counter-attack by the enemy.

By command of Brigadier General Bamford:

DUNCAN K. MAJOR, JR.,
Chief of Staff.

While at Technology Captain Macleod was taking Course II. He graduated in 1914, and went to Providence, R. I., to accept a position with the Brown & Sharpe Manufacturing Company.

1915

WILLIAM B. SPENCER, Secretary, 544 North Grove Street, East Orange, N. J.
FRANCIS P. SCULLEY, Assistant Secretary, 5 Exeter Park, Cambridge, Mass.

We can give no tribute great enough, pay no homage deep enough to honor the memory of our beloved classmates who have given up their lives on the battlefields of France, for the freedom of their homes and their country.

Lieut. George N. Althouse, 315th Infantry, U. S. A., was killed in France while leading his platoon in a charge on German machine gun nests. His captain, David E. Williams, Jr., wrote to Mr. Wilson D. Althouse, his father, describing his death, and praising the bravery, pluck and leadership which George always showed. He was honored and loved by his friends and men in the service for those same qualities of good-fellowship and manhood which we found in him as our classmate.

Lieut. EDGAR D. BASCOM—Word has been received by Mrs. Winnie L. Bascom of Abington, that her son, Lieut. Edgar D. Bascom, was killed in action October 24. He was a member of B Company of the 101st Infantry, and a graduate of Technology. In 1917 he attended Plattsburg, where he received his commission.

The War Service Auxiliary reports the death of Lieut. Theodore H. Guething on October 15. He died at Picatuiny Arsenal, Dover, N. J., of pneumonia. "Spig" Guething received his B. S. degree with 1915, but entered and held class affiliations with 1914. Few men were better known then he about the Institute while he was there, for he was a fellow of splendid qualities. Whether it was in the classroom or on the athletic field, "Spig" was an inspiration to the rest of us.

Ensign John F. (Fritz) Staub is at the large naval station in Killingholme, England. He has been serving as Junior Aid in addition to his flying work.

M. F. Brandt has received his commission as ensign, U. S. N. A.—Henry Dowst, Jr., is located at the Ordnance Corps Training School, Pennsylvania State College. —George P. Elliot is with the 14th Chemical Railway Engineers, A. E. F.

Azel W. Mack is a lieutenant in the Gas Defense Division, Chemical Warfare Service, U. S. A.—John F. Bauer, Jr., was kept out of active service on account of his eyes, and has gone into radio work. He is now in the 298th Aero Provisional Service Squadron, Carnegie Technology, Pittsburgh.

Lieut. Paul H. Taylor has been cited for distinguished service in France. He is one of the few men whose work behind the lines won for himself praise in the general orders. Lieutenant Taylor's work was in the mobile repair department.

Henry L. Leeb is now 1st lieutenant in the navy, attached to Radio Service, and is also admiral's aid.—Alfred F. Nye, IV, is 1st lieutenant F. A., U. S. A., Battery E, 13th Regiment, Camp Jackson, S. C.

Ensign Henry C. Sheils was married to Miss May M. Lynch in Roxbury, about the middle of September.

Lieut. Howard H. Wells, Aviation Section, Military Aeronautics, was married to Miss Margaret Johnson on November 12, in Los Angeles, Cal.

Lloyd H. Chellman and Miss Alice Willard were married in Roslindale, Mass., on November 16. Chellman is attached to the Engineers Corps, U. S. A.

Ralph D. Waterman has been working during the past year on the construction of the mammoth Hog Island ship building plant, where so many records have been broken.

Walter M. Africa is with a concern installing toluol apparatus at many of the gas plants throughout the country.

1916

JAMES M. EVANS, Secretary, 1916, 16th Street, N. W., Washington, D. C.

DONALD B. WEBSTER, Assistant Secretary, 18 Clarendon Street, Malden, Mass.

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INGRAHAM, FRANKLIN T, April 11, 1918. 2d Lieut., C. A. C. Died of pneumonia at home.

ERVAY, BRONAUGH E., November, 1918. 2d Lieut. 21st Infantry. Died of influenza while in Washington, D. C., on special duty.

MAYERS, HAYDEN POTTER, November 13, 1918. Capt., 60th Infantry, 5th Division, A. E. F. Killed in action.

MORRISON, PHILLIPS G., October 12, 1918. Capt., Ord. Died of pneumonia at Aberdeen Proving Grounds.

ROPER, GEORGE, JR., May 27, 1918. Cadet, British Royal Flying Corps. Killed in an accident in England.

SPRAGUE, WILLIAM G., October 26, 1918. Ensign. Died at Ile Tudy, Finistre. Won Croix de Guerre for attacking and sinking an enemy submarine.

UHLINGER, JAMES P., October 16, 1918. Sig. Corps Aviation. Died of pneumonia at Camp Meade, Md.

WYMAN, ALFRED T., May 27. Lieut., British Royal Flying Corps. Killed in an accident.

Army, 4. Aviation, 3. Navy, 1.

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Since we sent our last report to the REVIEW the thundering of the guns on the front has ceased. The tide of war work has started to turn, and the men from "over there" and "over here" are gradually returning to their homes and to their former walks of life. Operations in all parts of the country are bent towards the homecoming of the men and the returning of all to a peaceful and well organized country and government.

The Institute, the class and her officers welcome all Technology men and congratulate each one individually for their achievements in helping to give Peace and Democracy a firm footing in the Universe.

A 1916 Reunion has been talked about for the spring of 1919, and the secretary-treasurer is open to any suggestions as to a probable date and place for such a pow wow. A great many of the "Sixteeners" have stopped off and said, "Hello!" to the bunch in Washington and all sanction a reunion. Any members of the class having ideas or suggestions are asked to put them down on a piece of paper and forward them to the secretary-treasurer immediately. This will enable the officers to have a temporary vote and a rough estimate of the sentiment of the class on this subject before they start things moving.

It was with deep sorrow that we learned of the death of Jimmy Uhlinger, Bill Sprague and Hayden Mayers. Jimmy died after a short illness at Camp Meade, Md. Bill was a flying ensign and had been flying over European waters since July, 1918. He was killed in a battle with the Huns. Mayers was a captain of infantry and was slightly wounded last summer. He recovered and returned to his regiment in August. He is reported to have been killed in an engagement some time in September. Mayers took his army examinations in the fall of 1916 and was appointed second lieutenant in the 19th Infantry on March 22, 1917. He was promoted to captain July, 1918, and was serving with the 60th Infantry in the 5th Division.

"Bill" Wylde, a lieutenant in the 91st Division, Sanitary Corps, was wounded slightly on October 2. He has reported that he was wounded on the head by a fragment of a shell.

The reports that Bill Dodge, IV, was seriously wounded have been corrected by his brother, Parker Dodge, '07, who writes, "that Bill, while serving with the 16th Infantry as a second lieutenant was wounded by shell fragments July 19, 1918. He received five flesh wounds that caused him to be reported as seriously wounded, but under date of August 14, Bill reported that he was about to be discharged from the hospital in Paris and was expecting to return to his regiment."

Raef Alfaro has been commissioned a second lieutenant of Engineers, A. E. F., O. T. C., in France. He is with Chuck Loomis and "Luky" Lucas. Luky is also attending this camp.

Bob Allen, after leaving the Technology Ambulance Unit, joined the French army and is an artillery officer. "Bob" in a recent engagement was the only man left in his battery.

Bill Shakespeare has been promoted to a major in army ordnance. Bill is our second major, being preceded only by Don McRae.

"Moose" Jewett is now chief engineer for the E. I. Williams Drop Forge Corporation of Buffalo, N. Y. This firm has been doing one hundred per cent war work ever since the war started.

Howard Claussen has been promoted to a senior lieutenant in the Navy Flying Corps under the recommendation of Vice-Admiral Sims. Howard returned after serving ten months in France and England. He is the ranking line officer of 1916's navy.

Tom Holden, who was a first lieutenant in the Signal Corps, and who has performed some very valuable experiments in aircraft ordnance, has been returned to inactive duty and has gone to New York to return to his profession.

The class officers wish to extend their thanks to Mr. John G. ("Reverend") Fairfield for his hearty co-operation in submitting class notes for the last issue of the TECHNOLOGY REVIEW.

Now that the members of the class will be returning to their former positions, it is thought wise to ask them at this time to forward the Alumni Association a full record of their achievements for the past eighteen months. A class letter will probably be sent out about the first of February, and the secretary-treasurer respectfully requests the hearty co-operation of every man in filling out the data sheet and returning it immediately.

From June to December, 1917, Arthur P. Coldwell, Jr., was assistant (in charge of ordnance) to the vice-president of New York Air Brake Company; December, 1917, to May, 1918, instructor in airplanes department, United States School of Military Aeronautics, Princeton, N. J.; May to August, 1918, a private in the A. S. S. C. and instructor in Aeronautical School; August 21, 1918, commissioned as first lieutenant in air service duty, instructor in aeronautics.

Thomas D' A. Brophy is captain, C. A. C., Washington, D. C.—Sergt. Carlin F. Harrington of Co. D, 104th Infantry, A. E. F., is now in the United States to instruct at training camps. Address, Headquarters Company, 48th Infantry, Camp Sevier, S. C.—Albert Holmes is first lieutenant, 112th Engineers, A. P. O. 763, A. E. F., France.

Mr. and Mrs. Cornelius Wylde, of Orchard Terrace, have received word from their son, Lieut. Wilfred A. Wylde, who was wounded recently in France, that he has arrived in New York, having been invalided home. His condition is much improved, but he expects to remain in an army hospital for some time. Lieutenant Wylde, who is a graduate of Massachusetts Institute of Technology, served in the gas division in France. He is one of the first of North Adams' wounded soldiers to return.—"Albany Knickerbocker," December 1, 1918.

Mr. and Mrs. Otto C. Winestock of Perkinsville, Vt., have announced the engagement of their daughter, Lillian Clara, to Capt. Halbert Hale Neilson of Lexington, Miss. Miss Winestock is a former student at the New England Conservatory of Music. Captain Neilson is step-son of ex-Governor Noel of Mississippi. He is captain in the 11th Cavalry, and since last June has been detailed to aviation at Park Field, Memphis, Tenn.

The assistant secretary, Donald B. Webster, 1st Lieut., 69th C. A. C., writes from Lussac de Lebaume, Grande, under date of December 14, 1918:

> Regret that I am not yet in a position to compile any news, but hope to be again in the near future.

He sends an extract from the "Andover Townsman," of October 18, 1918:

> The death of Capt. Phillips Garrison Morrison came suddenly last Saturday night at the Aberdeen Proving Grounds in Maryland, where he was stationed in the Ordnance Department. Friday his parents, Mr. and Mrs. John L. Morrison, of 68 Elm Street, received word that their son was most seriously ill with pneumonia, and Mr. Morrison left at once for Maryland. He was joined in New York by his son, Frederick, and they arrived in time to see him Saturday. He died during that night and the body was brought home immediately under military guard. Major J. E. Fullam was sent to represent the post.
>
> The funeral services were held Wednesday afternoon at two o'clock at the home and were conducted by Rev. Frank R. Shipman and Rev. E. Victor Bigelow. A company from the Phillips Academy Battalion acted as escort to the West Parish Cemetery, where a military service took place. The bearers were commissioned officers from this company.
>
> Captain Morrison had been in Andover only a week before to attend the funeral of Mrs. Irene Wood Sutcliffe. At the time he had a slight cold, which developed, on his return to Aberdeen, into pneumonia. Although he rallied a little on Friday, his illness was too severe for a recovery.
>
> Phillips Garrison Morrison was born in Merrimac, Mass., on March 22, 1894, but soon after the family moved to this town, where he went to the public schools to prepare for Phillips Academy, graduating in the class of 1912. Here he was an

honor student every year and prominent in many school activities, being a member of Alpha Delta Tau, an honorary society. He continued to make a fine record for himself at the Massachusetts Institute of Technology, where he took the electrical engineering course, and was graduated with honors in 1916. Following college he entered the employ of the engineering firm of Charles T. Main, in Boston, and was there until he entered the service in June, 1917. He received at that time a commission as first lieutenant in the Ordnance Department, and went to Frankford Arsenal in Philadelphia, where he was in charge of power plants and auxiliary shops. In January, 1918, he was advanced to the rank of captain, and shortly after, in April, he was transferred to the Aberdeen Proving Grounds in Maryland. Here he was first a proof officer, and later, at the time of his death, he was assistant to Major Fullam, the head of the Acceptance Division.

Besides his mother and father he is survived by two older brothers, Frederick H., who is in the American Woolen Company office in New York City, and Alexander, of 354 Ames Street, Lawrence, chemist for the American Woolen Company in that city.

Captain Morrison was a member of the St. Matthews Lodge, A. F. and A. M., in Andover, and he also belonged to the American Institute of Electrical Engineers.

Throughout his comparatively short life of twenty-four years he maintained the highest ideals, and, because of his strong character he was always a vital influence in school, in business, and with his soldiers. At the post he was regarded by every one as one of the most promising young officers. In fact, he was the youngest captain there, and it was expected by his superior officers, Major Fullam and Colonel Phillips, the commanding officer at that post, that he would receive very soon an advancement to the rank of major. This promotion would have meant that he would have been one of the youngest majors in the United States Army, and is only a further proof of his marked ability.

In Andover he was well known and well liked by many friends, so that here, also, in this community, the loss of one of its most brilliant citizens will be keenly felt. The sympathy of every one is extended to the family at this time.

1917

Walter L. Medding, Secretary, Army Engineer School, A. P. O. 714, A. E. F.
Arthur E. Keating, Assistant Secretary, 893 Seaview Avenue, Bridgeport, Conn.

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Atkins, Arthur K., August, 1918. 2d Lieut., 165th Infantry.

Atkinson, Henry M., Jr., November 9, 1918. 1st Lieut., 71st C. A. C. Died of pneumonia at Angers, France.

Couch, Edward S., February 6, 1918. 2d Lieut., B Co., 1st Bn., 22d Infantry. Death by accident at Fort Leavenworth.

Jones, Charles E., February 15, 1918. Cadet, Avia. Sec., Sig. Corps, Observation Pilot. Killed in airplane accident in France.

Swan, Leroy, June 19, 1918. 2d Lieut. Killed in airplane accident in Springfield, Ohio.

Tierney, Harold J., October 22, 1918. Lieut., Camp Vail, Little Silver, N. J. Died at camp.

Army, 4. Aviation, 2

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No report received from the secretary.

The following is a copy of a letter which has just been received from Arlando Marine, the father of J. Sidney Marine, who was a lieutenant in the air service, and reported severely wounded in the casualty list of November 20:

It is very kind of you to write inquiring about our son, Lieut. J. Sidney Marine, but I do not know of anything that you can do at the present time. We are having frequent letters from him, and have also been advised by the War Department. Advices from the War Department, however, did not reach us for two months and eleven days after he was injured. The department simply states that "he was wounded in action" and that "he is under treatment for fracture of the right thigh bone and bones of the leg and multiple lacerated wounds of the face." He writes that his leg was broken three times and that he had to take his food through a straw for some days, but his letters are full of pep and good cheer,—thinks he may be home by Christmas time.

His only reference to the cause of the injury is that he "hit the ground and woke up in the hospital." To us these details, however, are of no particular interest, the point we are grateful and most thankful for is that he did not make the supreme sacrifice.

The New York "Evening Sun" of November 22 prints the following:

Lieut. John C. Tyler of the aviation forces is believed by his relatives to have been killed in action on September 16, since which date he has been missing, although no official news of his death has yet been received. Lieutenant Tyler, twenty-five years old, was graduated from the Brooklyn Polytechnic Institute and from the Massachusetts Institute of Technology. Soon after graduation he entered the aviation corps and after training in France was placed in command of a French escadrille. He was transferred to an American squadron.

From the same newspaper of October 2 is a notice of death of one whose name is on the honor roll:

Lieut. Arthur K. Atkins, formerly an engineer with offices at 87 Wall Street, has died of wounds received in action. When war was declared he went to Plattsburg, where he was commissioned. After that he was stationed at Governors Island for several months. He went overseas with the 165th Infantry, the old 69th, but was later transferred to the 126th Infantry.

Lieutenant Atkins was a son of Mr. and Mrs. Ashley Atkins of Brookline, Mass. His grandfather was Judge Thomas A. Atkins of Yonkers. The soldier was a graduate of the Massachusetts Institute of Technology.

Lieut. H. M. Atkinson, Jr., died in Angers, France, of pneumonia, November 2. While assisting the chaplain of his battery in ministering to the pneumonia patients in the hospital and in burying those who died from it, with no thought of his own personal welfare and without taking the necessary precautions for his own protection, he himself contracted pneumonia, from which he died on November 2.

After enjoying a brief furlough with relatives and friends whom he had not seen for over a year, Lieut. Arthur R. Knight left Sunday night for Washington, D. C., where he is to receive final orders before being sent, with three other lieutenants, to Houston, Texas, to start a school of instruction in night bombardment. Although there are many schools for preliminary and advanced flying in the United States, there is, at the present time, no school of instruction in night bombardment.

Lieutenant Knight has been flying over the lines for the past eight months, three of which have been in day and five in night bombing.

Lieut. Arthur Raymond Knight of Newburyport, who was awarded the Croix de Guerre, has returned from France after some exciting adventures as an airman with the French and American forces. When he first went across he flew with the American air service, and was later transferred to the French. He was in France a year.

Lieutenant Knight is twenty-three years old. He is a graduate of Tufts College, and the United States Army School of Military Aeronautics, Massachusetts Institute of Technology. He is the son of Mr. and Mrs. David G. Knight of Newburyport.

While fortunately escaping serious injury, he was for a short time in a hospital in France with minor injuries received in a crash in one air battle. His many friends in this city wish him success in his future work.

Corp. John G. McLoud, 1725 Woodhaven Avenue, was drafted by Local Board No. 78 on July 27 of last year. He is a graduate of the Massachusetts Institute of Technology, after completing the chemical engineering course in three years in June, 1917. He is a member of the American Chemical Society, Northeast Section, and an active member of the Smithsonian Institute for the Advancement of Science. Corporal McLoud is on special duty as a psychological observer at the base hospital.

Everett L. Gayhart, XIII-A, is inspector of naval aircraft, United States Navy, at Canadian Airplanes Ltd., Toronto, Canada.

Forrest Estey Williford, VI, is now a colonel.

Seymour P. Houghton, XV, was made a captain in June.

S. R. Barrows at last accounts was at the Bath Shipyard in Maine as junior inspector.

W. I. McNeill, XV, was married to Miss Albertina Nelson at Wakefield, Mass., on October 9, 1918.

Capt. N. E. Tourtellotte, IV, is director of instruction, O. and T. C., No. 2 T. A., A. P. O. 753:

> There are three of us, another captain and a second lieutenant, and we are picking up pointers on how to run such a center, since we are daily expecting orders to go to a near-by town and start a new center. That is what happened in a number of cases, to the men that volunteered to come over first. They grabbed us off, sent us to a dozen or so schools—French and American— and are now using us as instructors. Of course we are sent to the front off and on, but only for a few days, in a glorified Cook's Tour, to let us pick up what extra information we need in our instructing. However, I've finally got an opening to really get "up there" and to stay up. After we have run a few regiments through our center the colonel in command has been promised a regiment at the front, and in turn has promised to take us up with him. In that way I expect to get up about Christmas time, finally to send a few shells at the Boche himself instead of telling others how to do it!

Edward P. Brooks: Two letters written in September tell of his activities beginning July 18.

> Our men are wonderful fighters. Really, I do not think the papers at home or those here have given them any unjust praise. They are superb fighters. I started to write "soldiers," but taken in the sense of the soldiers of the continent they have much to be desired. The average American in our army is over to "lick the Boche and get back home as quick as he can." To accomplish that he is willing to become a soldier, but as he says, "Let's chuck all that an' jes' fight." Not only was it the veterans in this division but many of the new outfits, scarcely having had their baptism of fire, did very creditable work. My own part in the battle was very small indeed. The night preceding, my platoon of engineers accompanied a group of tanks to assist them in case they met obstacles. Shortly after the attack commenced we went out over the field to help any tanks in distress, but things were too hot for us to be able to help. The following days I spent doing odd jobs, such as locating an advanced division, acting as liaison agent with the regiment.

Lieut. Dudley Bell writes under date of August 1, from the McCaul Hospital in London, and October 17, from the American Rest Camp, Standom Hursley, England. In the first letter he writes that his body "was thrown many yards, but never received a broken bone. A dislocated hip, torn muscles, a mass of bruises was the extent of my injury." The more recent letter states that the medical board has decided that he is not yet fit for line duty, so he has been at the Rest Camp temporarily. He finds it hard, however, to reconcile himself to so inactive a life.

Tourtellotte writes that J. F. Wallis, Jr., is a captain in the Coast Artillery Corps, is now an aerial observer and sports a wing. He has been at the front all summer and has had quite a few lively experiences.

Walter L. Medding writes from the Army Engineer School, A. P. O. 714, under date of September 12. He was relieved from the 318th and assigned to a school in France for a short course in military engineering. At the end of that course he went to the 6th Engineer School, but only for a short time, when he received orders sending him to the address mentioned above, as an instructor in bridging.

S. S. Batchelder, XV, under date of September 3, writes that he was in England, flying, until early in July, and has been since that time attached to a British squadron. His work has been interesting, but to date he laments that he has not been fortunate enough to bring down any Hun machine, but hopes to do so before long.

W. J. Beadle, II, VI, is a lieutenant at the Army Candidate School, Langes.—Alfred K. Althouse, III, was sent to the Officers' Training School at Camp Humphreys, Va., in September.—P. V. du Pont, IX, has left the Institute, where he has been an instructor, and is now in Wilmington, Del.

From the Rochester, N. Y., " Democrat -Chronicle," of December 27, 1918:

> Major Herbert C. Williamson, son of Mrs. May Williamson, of 200 Birr Street, has returned from overseas. Upon his graduation from the Massachusetts School of Technology he entered the officers' training camp at Plattsburg in 1917. He was commissioned a second lieutenant and was assigned to Camp Devens, Ayer, Mass. Later he was commissioned captain and sailed overseas in July, 1918. He was promoted to major on October 7, and was acting adjutant of the 76th Division.

1918

DAVID M. MACFARLAND, Secretary, 626 South High Street, West Chester, Pa.

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ANGELL, CYRIL M., May 14, 1918. 1st Lieut., 147th Aero Sq., A. E. F. Killed in action.

BROWN, MALCOLM C., July 24, 1918. Lieut., Royal Flying Corps, England. Killed in airplane accident.

EASTMAN, W., JR., November 8, 1917. Instructor, A. S. M. A., M. I. T., Cambridge. Death by accident.

ELY, DINSMORE, April 21, 1918. 2d Lieut., Lafayette Escadrille. Died from injuries received in an airplane accident.

GAILLAC, EMILE B., November 7, 1917. Pvt., 101st Engrs. Died in France of bronchial pneumonia.

GOULD, PRESCOTT W., May 23, 1918. Co. C, 102d Machine Gun Bn., A. E. F. Killed in action.

MAY, JAMES DE G., May 9, 1918. Lieut., Officers' Hdqrs., Kelly Field, No. 2, Texas.

PARSONS, ARTHUR M., July, 1918. 2d Lieut., Aviation. Taliaferro Field, Texas. Killed by propeller.

SAWYER, ENOS C., April 21, 1918. Batt. A, 101st F. A. Died of wounds received in action.

SCHROEDER, FRED E., January 14, 1918. Pvt., 23d Regt. Engrs. Died of disease, Camp Meade, Md.

SMITH, WINTHROP F., October 10, 1918. Ensign U. S. N. Died of pneumonia at Bay Shore, Long Island.

TOVEY, HENRY O., March 22, 1917. Ensign, U. S. N., U. S. S. " Maine." Lost at sea off Cape Cruse.

Tutein, Chester R., November 17, 1918. Aviation. Killed in airplane accident in France.

Wooten, James C., August 3, 1918 (about). Killed in action in France.

Army, 5. Aviation, 7. Navy, 2.

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No report received from the secretary.

Among the many officers and men returning from overseas on the "Canopic," December 11, was Lieut. Carleton W. Blanchard.

"It's good to be home, but it was pretty rotten not to get even one crack at them," grinned Carleton W. Blanchard, of 308 Linwood Street, Abington, a member of the United States Air Service. Lieutenant Blanchard is a member of the class of 1918, at Technology, and left school early in the year for aviation duty. After training in this country he was sent to Monteith, Scotland, to train with the Royal Flying Corps. Later he was attached to the 17th Camel Squadron, so called from the name of the plane it uses. A few days more would have seen him in action.

"I'm going right back to Tech as soon as I am discharged," he declared. "That seems to be about the best thing to do, doesn't it, pick things up again where you left 'em?"

Norman Dawson, XI, commissioned second lieutenant, has been at Saumur Artillery School since landing in France.

Bernard Pinkham is now second lieutenant, Chemical Warfare Service, U. S. A.

The Review office received word of the death on October 16, 1918, of Joseph Amey Shepard.

Every one at the Institute regrets to learn that Mr. Bernard O'Daly, instructor at Technology, passed away December 2. Mr. O'Daly was taken ill just before Thanksgiving with a bad cold. His condition was not considered serious, and he was improving when pneumonia developed. Funeral services were held December 5, at nine o'clock.

Mr. O'Daly was born June 11, 1897. He prepared for Technology at the Boston English High School and entered the Institute as a freshman in the Chemical Engineering Course. He was a member of the Chemical Society, the E. H. S. Club, and the Catholic Club. In his senior year he was president of the Catholic Club. Since he graduated Mr. O'Daly has been an instructor in the Department of Chemistry at Technology.

Lieut. Albert F. Murray, I, of Albany, Ala., is instructing in the School of Military Aeronautics at Cornell University. He was commissioned a first lieutenant in the air service and was assigned to the Signal and Radio Department.

Arthur Litchfield Russell was married to Miss Agnes F. Kelly on November 6, at 7.30. Russell was born December 4, 1896, and prepared at Boston English High School for Technology. He took a course in Electrical Engineering. His thesis was on "The Design of Hydro-Electric Plant at Raymond, N. H." Russell was a member of the Eectrical Engineering Society and the English High School Clubs. Mr. and Mrs. Russell are living at 764 Morton Street, Mattapan, Mass.

1919

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Garnsey, Arlo E. October, 1918. Lieut., Avia. Sec. Died of disease in France.

Homer, Joseph W., Jr. November 9, 1918. Ensign, U. S. N. R. F. C. Died of pneumonia in London.

Pero, Donald C. August 24, 1918. Ensign, U. S. N. R. F. C. Killed in seaplane accident off Fire Island

SANTOS, ALEXANDER H. July 15, 1918. 2d Lieut., Instructor in aviation. Killed in airplane accident, Brook Field, San Antonio, Texas.

WASGATT, HAROLD C. July 19, 1918. 1st Lieut., 59th Infantry. Died of wounds received in action in France.

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Ensign Joseph Warren Homer, Jr., of the United States Naval Reserve Flying Corps, died of pneumonia at the Naval Hospital in London on November 9. Joe Homer, Brookline High School, '15, Technology, '19, was an all-round athlete, fond of football and tennis and more recently of "rugger" and soccer. He was a good swimmer and especially happy when on a spirited horse. He was born in Roxbury, April 11, 1897, but soon afterwards came to Brookline to live, and attended the schools here. After his course at the High School he attended the Stone School, Boston, to prepare for Technology, which he entered with the class of 1919.

While there he was much interested in the activities. He was a substitute on his class football team and rowed on the class crew.

He became one of the reporters on "The Tech," and on April 1, 1916, was made associate editor.

At the time of the opening of the new Technology buildings Joe took no part in the great pageant and celebrations which were then going on, but attended to the drudgery of gathering news and hustling out the daily editions of "The Tech."

He was an active member of the S. A. E. Fraternity, in the good fellowship of which he took keenest pleasure.

But in December, 1916, he decided to get into more definite work and found such an opportunity in the Potomac Cotton Mills of New Bedford. He was given the "run of the mill" and was learning all about cotton from the opening of the bale to the finished shirting.

But the war made him uneasy again. He wanted to be "in it." So, in June, 1917, in the Charlestown Navy Yard, he enlisted as a volunteer in the service of the United States, with the promise of being an aviator. In August of that year he joined the Aviation Detachment Corps at Massachusetts Institute of Technology. On October 27, 1917, he sailed for England, being one of fifteen men who volunteered to go over to learn to fly "Blimps."

After a cold, bleak winter of strenuous study and severe physical training and adventure at various ground schools and naval airship stations on the coast of England, he received a pilot's license. Last spring he was established on the south coast of England, doing convoy and observation work over the English Channel. He was twice lost in fog. Once he was blown sixty miles north of his course, his airship being damaged after landing. Again he was blown eighty miles south, landing for a few minutes on the north coast of France. He steered home by compass, landing within two miles of his destination. In August he was transferred from Eastbourne, England, to a station near Edinburgh, Scotland, and was made third officer of one of the largest airships, a "Rigid" about three hundred feet long, and since then had been flying out over the North Sea. Having established a reputation as an all-round naval airship pilot, he was last month sent to London headquarters where, according to a letter to his father written October 25, he was "taking a course in structure and design of airships," and hoping "to get on to the staff" and feeling "fit as a king."

He was the only son of Joseph Warren and Constance Homer of Brookline. He leaves his parents, two sisters, Mrs. Edwin S. Parker of Jamaica Plain, and Mrs. Richard W. Crocker of Brookline, and hosts of loving friends.

Letter received by Mr. Homer from his son:

It would be strange to see a soldier discussing such themes did we not know that France had poured out of her very best and finest of character, intellect, cultivation and artistic professions of all sorts, into the trenches and the drear and dreadful vigils, broken into by combats only less horrible than the suspense—fortunately now, all over in time for Thanksgiving and Christmas—had we not, likewise, sent over the finest flower of our youth. The family of one of these young heroes, of a Brookline ensign, whose position in the war was that of naval aviator, pilot of an English dirigible in the observation service and in the convoying of transports over the English Channel, had had two days of serenity and content after the confirmation of the armistice, when official news reached them of a different sort, a despatch from the Bureau of Navigation announcing the death of the young airman. A little later came the cable that was intended to precede it, stating that he was ill in a London hospital with pneumonia. Two days of peace rejoicing and expectation of holiday reunion with their only son were all! The end had come November 9, and peace so nigh! Not long before, in reply to a letter from his father, asking him to give his parents some idea of his sensations in a flight before dawn, the aviator had dashed off the following note, words of remarkable beauty and dramatic vividness and power:

South Coast of England,
July 10, 1918.

Dear Father—Yours of the 15th ult. at hand and contents carefully noted. I wrote you one long and very poetic letter about the sunrise over the clouds. It is gorgeous—sublime—incomparable—untellable. One doesn't feel very poetic after one has been out in the darkness and fog all night—but when the sun rises and lights up the tops of the mist one forgets the war, the cold, the cramped legs, and glories in the beauty of the scene. The sun comes up out of its cloud of gray, turning it to a shell pink. Then, as it climbs higher, it sets the whole sea of clouds sparkling and seething—a myriad of rainbows, a mass of majestic, rolling, heaving beauty.

There is no use in my trying to explain it—one must be in it and surrounded by it—the only bit of humanity in all the vast firmament—then only can it be appreciated.

It seems that the "long and very poetic letter" to which he referred never reached the father, alas! The true interpretation of the tragedy has been fitly framed in this poignant quatrain:

J. W. H., Jr.
1897—1918

He held his course high o'er the restless deep,
His boon companion was the morning star
He watched; and now the stars his vigils keep —
His flight is winged to where all heroes are.

In reply to your request for information regarding my deceased grandson Alexander Hervia Santos, of Technology, I am glad to have the opportunity of giving you the details you desire:

After graduating high in his class from the ground instruction Aviation School, at Princeton, N. J., he was sent to a training camp at Park Field, Memphis, Tenn., where he won his commission as second lieutenant. He was then transferred to a Post-Graduate Officers' Camp, at Brook Field, San Antonio, Texas, as an instructor, and soon became one of the star flyers there. On the fifteenth day of July, he was appointed to give cadet instruction in making a forced landing. The cadet had previously been instructed as to the method of doing this, but was now to put his knowledge into practice. After my grandson had taken up the plane to the proper height, he shut off the power, to simulate a disabled engine, and turning to his pupil, asked him what he was going to do about it. The young man had been taught he must depress the nose of the plane—instead he raised it, throwing it on its side, in an aileron spin. The officers in the observation tower saw my grandson at once begin to right the machine, and had nearly succeeded in doing so when for lack of about fifty feet of space, the wing struck the high bank of a dried river, and was completely crushed. My grandson lived about five minutes after reaching the Base Hospital, where he was immediately taken, the cadet injured, but not seriously. My grandson was buried in Baltimore, where he had a military funeral, furnished from Port Howard, near here. I quote you a sentence from a letter sent us by his commanding officer: " He died as a commissioned officer in the service of his country with as much courage and loyalty as though he had already been on the battlefield in France. He certainly merits a place on the Honor List."

From the Albany, N. Y., " Argus " of October 19, 1918:

Victor Wynne, of 274 Partridge Street, who sailed for France ten days ago as a second lieutenant of engineers, has been commissioned a captain, according to a letter received yesterday by his parents, Mr. and Mrs. V. C. Wynne of the same address. The young man is but twenty-two years old and one of the youngest captains in active service.

He is a graduate of the Albany High School and Union College, and also received education at the Massachusetts Institute of Technology. Shortly before notified of his commission as lieutenant, he broke both wrists while assisting his father in the construction of the Delaware & Hudson building. He has a brother also in service.

SCOTT, TANK COMMANDER ROBERT W., 38 Esmond Street, Dorchester. Unofficial.

In a letter to his father, Robert A. Scott, Robert Wesley Scott, XV, states that he was wounded by a shell fragment which struck his " land " battleship. The missile lodged in the left arm. Scott, who is a former English High School athlete and a member of the class of 1919, Massachusetts Institute of Technology, volunteered for the ambulance service in August, 1917. At the call for volunteers for the tank service he responded and became corporal, then sergeant, and was finally placed in command of his tank.—The Boston " HERALD," November 17, 1918.

" The Tech " of October 30 prints the following item about Charles H. Tavener:

Charles H. Tavener has accepted a position as aeronautical engineer in the mathematical department of the Curtiss Engineering Corporation, at Garden City, Long Island. This corporation does all the research work required by the Curtiss Aeroplane and Motor Company of Buffalo, the largest manufacturers of airplanes in America.

While at the Institute Mr. Tavener was a leading spirit in many undergraduate activities. He was one of the founders of the Aero Club, of which he was successively secretary, president and vice-president. He was chairman of the sub-committee on Aeronautic Preparedness, and acted as publicity manager and assistant editor of the Technology monthly. In the technical societies he was a student member of the A. S. M. E., and a junior member of the S. A. E.

John Telford Elliot, son of Mr. and Mrs. John Elliot of Newburyport, has enlisted in the navy for active service and has reported to Bumkin's Island, Boston Harbor.

George H. Wiswall has been elected class representative by the Executive Committee of the Alumni Association, until the class has its own election.

Mr. and Mrs. Frederick Reid Estes of Brookline, announce the marriage of their daughter, Louise, to Captain Frederic Montgomery Lee of the 10th Infantry, U. S. A., son of Mr. and Mrs. Herman F. Lee of Glen Ridge, N. J. The marriage took place at Battle Creek, Mich., last Saturday. The bride, who was to have been numbered among this season's debutantes, is known among her intimates as "Peggy" Estes. Captain Lee, who has been on duty at Camp Custer, was formerly a student at Princeton University, and later studied at Technology, leaving his course there, where he belonged to the " Number Six Club," to go to the Mexican border, where he was on duty with Battery A. Later he attended the army school in Washington D. C., and there he received his commission.

Clarence Leighton Nutting has returned to Technology as an instructor. He, was sent to a southern camp early this spring and after some time there was transferred to the Chemical Warfare Service at Cleveland. He was again transferred, this time to the infantry and sent back here on an indefinite leave of absence. While an undergraduate, he was a student in course V. He was also a member of the chemical society. Nutting is at present helping Cadet Colonel Hamilton drill the Institute Battalion.

Friends of Major Pierre Drewson, twenty-nine years old, of No. 1078 Park Place, are proud of his record. His early education was obtained at Polytechnic Preparatory School and he later obtained his degree at Amherst College and studied industrial chemistry at the Massachusetts Institute of Technology, where he won a second degree. He was a member of the 7th Regiment, and went to the Mexican border as a corporal. Later he went to Fort Myer, where he was made a captain of infantry and has since been assigned to Camp Lee, Va.

Vol. XXI APRIL, 1919. No. 2

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHVSETTS INSTITVTE OF TECHNOLOGY

PVBLISHED BY
THE ALVMNI ASSOCIATION

THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Cambridge, Mass.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY offers to give thorough instruction in *Civil, Mechanical, Chemical, Mining, Electrical* and *Sanitary Engineering,* in *Chemistry, Electrochemistry, Architecture, Physics, Biology* and *Public Health, Geology* and *Naval Architecture.*

To be admitted to the Institute, the applicant must have attained the age of seventeen years and must pass examinations in algebra, plane and solid geometry, physics, history of the United States (or ancient history), English, French and German. Preparation in some one of a series of elective subjects is also required. A division of these examinations between different examination periods is allowed. In general, a faithful student who has passed creditably through a good high school, having two years' study of French and German, should be able to pass the Institute examinations.

Graduates of colleges, and in general all applicants presenting certificates representing work done at other colleges, are excused from the usual entrance examinations and from any subjects already satisfactorily completed. Records of the College Entrance Examination Board, which holds examinations at many points throughout the country and in Europe, are also accepted for admission to the Institute.

Instruction is given by means of lectures and recitations, in connection with appropriate work in the laboratory, drawing-room or field. To this end extensive laboratories of chemistry, physics, biology, mining, mechanical engineering, applied mechanics, and the mechanic arts have been thoroughly equipped, and unusual opportunities for field-work and for the examination of existing structures and machines have been secured. So far as is practicable, instruction is given personally to small sections rather than by lectures to large bodies of students.

The regular courses are of four years' duration, and lead to the degree of Bachelor of Science. In some courses the work may also be distributed over five years by students who prefer to do so. Special students are admitted to work for which they are qualified; and the degrees of Master of Science, Doctor of Philosophy, and Doctor of Engineering are given for resident study subsequent to graduation. Opportunity for research is offered in all the departmental laboratories, in the three recently established Research Laboratories of Applied Chemistry and Physical Chemistry, and in the Sanitary Research Laboratory and Sewage Experiment Station.

The tuition fee, not including breakage in the laboratories, is $250 a year. In addition, $50 to $60 per year is required for books and drawing materials.

For catalogues and information, address

ALLYNE L. MERRILL, Secretary of the Faculty

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE, MASS.

ALUMNI ASSOCIATION

OF THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

OFFICERS

President, Henry A. Morss, '93 (term expires May, 1919).

Vice-Presidents,
- Morris Knowles, '91 (term expires May, 1919).
- Van Rensselaer Lansingh, '98 (term expires May, 1920).
- Hollis Godfrey '98 (President Technology Clubs Associated).

Secretary-Treasurer, Walter Humphreys, '97 (term expires May, 1919).

Executive Committee

The President, Vice-Presidents and Secretary-Treasurer.
George L. Gilmore, '90 (term expires May, 1919).
Joseph H. Knight, '96 (term expires May, 1919).
Orville B. Denison, '11, (term expires May, 1920).
Charles R. Main, '09, (term expires May, 1920).

TERM MEMBERS OF THE CORPORATION

Term expires June, 1919.

Franklin W. Hobbs, '89.
Frederic H. Fay, '93.
Gerard Swope, '95.

Term expires June, 1920.

James W. Rollins, '78.
Jasper Whiting, '89.
William H. King, '94.

Term expires June, 1921.

Samuel J. Mixter, '75.
Henry J. Horn, '88.
Harry J. Carlson, '92.

Term expires June, 1922.

E. W. Rollins, '71.
Willis R. Whitney, '90.
Elisha Lee, '92.

Term expires June, 1923.

Eben S. Stevens, '68.
Arthur D. Little, '85.
Paul W. Litchfield, '96.

STANDING COMMITTEES

Assemblies

Edward F. Parker, '04, until 1919.
Lawrence Allen, '07, until 1920.
Harold E. Kebbon, '12, until 1921.
Ambrose Walker, '91, until 1922.
Orville B. Denison, '11, until 1923.

Nominations

Term expires May, 1919.	Term expires May, 1920.	Term expires May, 1921.
Charles W. Eaton, '85, *Chm.*	A. F. Bemis, '93.	Francis R. Hart, '89.
Henry J. Horn, '88.	George B. Glidden, '93.	Joseph H. Knight, '96.
Harold E. Kebbon, '12.	Merton L. Emerson, '04.	G. D'W. Marcy, '05.

Permanent Funds

Robert H. Richards, '68, until May, 1919.
Francis R. Hart, '89, until May, 1920.
Frank A. Merrill, '87, until May, 1921.
Walter Humphreys, '97, *Treasurer.*

"The Technology Review"

Lester D. Gardner, '98, until 1919.
Warren K. Lewis, '05, until 1920.
M. B. Dalton, '15, until 1921.
H. S. Wonson, '07, until 1922.
Donald G. Robbins, '07, until 1923.

SPECIAL COMMITTEES

Alumni Fund

Everett Morss, '85, *Chairman.*
James W. Rollins, '78.
Arthur T. Bradlee, '88.
Edwin S. Webster, '88.
Frederic H. Fay, '93.

Runkle Memorial

Robert H. Richards, '68.
C. Frank Allen, '72.
Harry W. Tyler, '84.

Revision of Constitution and By-Laws

James P. Munroe, '82, *Chairman.*
Everett Morss, '85.
Frederic H. Fay, '93.

Historical Collection

Dean Alfred E. Burton, until 1919.
T. D'A. Brophy, '16, until 1921.
S. K. Humphrey, '98, until 1922.
James P. Munroe, '82, until 1923, *Chairman.*

Alumni Representatives on Board of Management of "The Tech"

R. B. Pendergast, '02.
P. C. Leonard, '17.

ADVISORY COUNCILS FOR UNDERGRADUATE ACTIVITIES

Members of the advisory councils are elected at the April meeting of the Council.

Athletics

Lawrence Allen, '07, until 1919.
C. A. Sawyer, Jr., '02, until 1919.
Allan W. Rowe, '01, until 1920.
(Eligible for re-election.)
H. E. Worcester, '97, until 1920.
Carl W. Gram, '09, until 1921.

Budget and Finance Committees

Bursar H. S. Ford, until 1919.
H. E. Worcester, '97, until 1920.
Merton L. Emerson, '04, until 1921.

Undergraduate Publication

William R. Greeley, '02, until 1919.
Grosvenor D'W. Marcy, '05, until 1920.
R. B. Pendergast, '02, until 1921.
A. T. Robinson, until 1922.
Paul C. Leonard, '17, until 1923.

"Tech Show"

R. E. Rogers, until 1919.
James I. Finnie, '09, until 1920.
George B. Glidden, '93, until 1921.

Musical Clubs

Arthur L. Gardner, '08, until 1919.
George E. Russell, '00, until 1920.
Allen Abrams, '15, until 1921.

THE M. I. T. COMMITTEE FOR NATIONAL SERVICE

James W. Rollins, '78, *Chairman.*

I. W. Litchfield, '85, F. A. Smythe, '89, Charles W. Eaton, '85, *Vice-Chairmen.*

A. F. Bemis, '93.
M. L. Emerson, '04.
F. H. Fay, '93.
L. D. Gardner, '98.
Morris Knowles, '91.
R. B. Price, '94.
D. G. Robbins, '07.
H. W. Tyler, '84, *Secretary.*

Executive Committee

James W. Rollins, '78.
Harry W. Tyler, '84.
Charles W. Eaton, '85.

Finance Committee

H. W. Tyler, '84, *Chairman.*
A. F. Bemis, '93.
George L. Gilmore, '90.
Walter Humphreys, '97, *Treasurer.*

By vote of the Alumni Council, February 16, 1914, the president and secretary-treasurer are members *ex-officio* of all committees, without vote.

COUNCIL OF THE ALUMNI ASSOCIATION

Officers of the Association:

President, Henry A. Morss, '93.
Vice-Presidents { Van Rensselaer Lansingh, '98.
Morris Knowles, '91.
President Tech Clubs Associated, Hollis Godfrey, '98.
Secretary-Treasurer, Walter Humphreys, '97.
Executive Committee { George L. Gilmore, '90.
Joseph H. Knight, '96.
Orville B. Denison, '11.
Charles R. Main, '09.

Five latest living ex-Presidents:

Frederic H. Fay, '93.
Jasper Whiting, '89.
Francis R. Hart, '89.
Henry J. Horn, '88.
Charles A. Stone, '88.

Honorary member: I. W. Litchfield, '85.

Representatives at large:

Until the annual meeting, 1919

Z. W. Bliss, '89.
T. D. Brophy, '16.
C. W. Goodale, '75.
F. W. Lovejoy, '94.
Charles W. Whitmore, '08.

Until the annual meeting, 1920

Wilfred Bancroft, '97.
Frank Cheney, Jr., '82.
Raymond W. Ferris, '08.
Stanley G. H. Fitch, '00
B. F. W. Russell, '98.

Class representatives:

'68, Robert H. Richards.
'69, Howard A. Carson.
'70, Charles R. Cross.
'71, E. W. Rollins.
'72, C. Frank Allen.
'73, Samuel E. Tinkham.
'74, George H. Barrus.
'75, Thomas Hibbard.
'76, C. T. Main.
'77, B. T. Williston.
'78, E. P. Collier.
'79, Charles S. Gooding.
'80, George H. Barton.
'81, John Duff.
'82, James P. Munroe.
'83, Horace B. Gale.
'84, Harry W. Tyler.
'85, Arthur D. Little.
'86, A. A. Noyes.
'87, Henry F. Bryant.
'88, John C. Runkle.
'89, Henry Howard.
'90, William Z. Ripley.
'91, Arthur H. Alley.
'92, Leonard Metcalf.
'93, George B. Glidden.
'94, S. C. Prescott.
'95, H. K. Barrows.
'96, J. Arnold Rockwell.
'97, C. W. Bradlee.
'98, Seth K. Humphrey.
'99, H. J. Skinner.
'00, Ingersoll Bowditch.
'01, Robert L. Williams.
'02, F. H. Hunter.
'03, T. E. Sears.
'04, M. L. Emerson.
'05, G. D'W. Marcy.
'06, Edward B. Rowe.
'07, Lawrence Allen.
'08, H. T. Gerrish.
'09, Carl W. Gram.
'10, Charles E. Green.
'11, Herbert Fryer.
'12, Harold E. Kebbon.
'13, W. R. Mattson.
'14, Chas. Parker Fiske.
'15, Marshall B. Dalton.
'16, Russell H. White.
'17, Paul C. Leonard.
'18, Kenneth Reid.
'19, Geo. H. Wiswall, Jr.

Local Societies with representation on the Council:

Akron—Technology Club of Akron, Ohio,	W. K. Lewis, '05.
Albany—Technology Club of Eastern New York	Myron M. Davis, '08.
Birmingham—Southeastern Technology Ass'n,	H. S. Wonson, '07.
Buffalo—Technology Club of Buffalo,	Arthur C. Anthony, '86.
Butte—Technology Club of Montana,	George A. Packard, '90.
Charleston—Technology Club of West Virginia,	Arthur E. Fowle, '93.
Chicago—Technology Club of Chicago,	B. R. T. Collins '88.
Cincinnati—Technology Club of Cincinnati,	H. N. Dawes, 93.
Cleveland—Technology Club of Northern Ohio,	C. W. Eaton, '85.
Connecticut Valley Technology Club,	Eben S. Stevens, '68.
Dayton Technology Association,	Charles F. Park, '92.
Denver—Rocky Mountain Technology Club,	Allen H. Rogers, '90.
Detroit Technology Association,	Everett Morss, '85.
Hartford—Technology Club of Hartford,	G. H. Gleason, '03.
Hawaii—Technology Club of Hawaii,	Edwin S. Webster, '88.
Japan—Technology Association of Japan,	H. W. Stevens, '84.
Kansas—Southwestern Association of M. I. T.,	W. L. Underwood, '98.
Lowell—Technology Club of Merrimack Valley,	R. A. Hale, '77.
Los Angeles—Technology Club of Southern California,	J. C. Chase, '74.
Manchester—Technology Club of New Hampshire,	Andrew Fisher, Jr., '05.
Milwaukee—Technology Club of Milwaukee,	George C. Wales, '89.
Minneapolis—Technology Club of Minnesota,	A. W. Rowe, '01.
Montreal—Technology Club of Lower Canada,	George W. Vaillant, '92.
New Bedford—Technology Club of New Bedford,	C. F. Lawton, '77.
New Haven County Technology Club,	Arthur T. Hopkins, '97.
New Orleans—Technology Club of the South,	Donald G. Robbins, '07.
New York—Technology Club of New York,	R. H. Howes, '03.
Philadelphia—Technology Club of Philadelphia,	Elisha Lee, '92.
Pittsburgh Association M. I. T.,	W. C. Cushing, '87.
Pittsfield—Berkshire County Alumni Association,	W. B. Snow, '82.
Portland—Technology Association of Oregon,	A. D. MacLachlan, '96.
Providence—Technology Club of Rhode Island,	Frank L. Pierce, '89.
St. Louis Society of the M. I. T.,	C. M. Spofford, '93.
Salt Lake City—Intermountain Technology Ass'n,	G. E. Russell, '00.
San Francisco—Technology Association of Northern California,	Burton G. Philbrick, '02.
Seattle—Technology Club of Puget Sound,	A. G. Robbins, '86.
Spokane—Inland Empire Association of M. I. T.,	H. W. Gardner, '94.
Springfield—Technology Club of Springfield,	Frederick W. Fuller, '96.
Syracuse—M. I. T. Club of Central New York,	T. H. Skinner, '92.
Washington Society of the M. I. T.,	Henry A. Morss, '93.
Worcester—Technology Association of Worcester County,	Orville B. Denison, '11.

Other Local Societies not yet appointed a representative on the Council:

Atlanta Association M. I. T.
Bridgeport—Technology Club of Bridgeport.
Chile—Technology Club of Chile.
China—Technology Club of China.
Duluth—Technology Club of Lake Superior.
Fall River—Technology Club of Fall River.
Harrisburg—Technology Club of Central Pennsylvania.
Indianapolis—Indiana Association M. I. T.
Louisville—Technology Club of Louisville, Ky.
Niagara Falls—Technology Club of Niagara Falls.
Panama—Technology Club of Panama.
Paris—Tech Bureau of the American University Union.
Peking—Technology Club of Peking.
Portland—Technology Club of Maine.
Rochester—Technology Club of Rochester.
Urbana—Tech Club of University of Illinois.

THE TECHNOLOGY CLUBS ASSOCIATED

ORGANIZED IN NEW YORK, JANUARY 17, 1913.

President, HOLLIS GODFREY, '98, Philadelphia, Pa.

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Dover, N. H.

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462 Walnut St., Newtonville, Mass.

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213 Floyd Street, Toledo, Ohio.

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95 Milk Street, Boston, Mass.

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70 Waban Hill Road, Chestnut Hill, Mass.

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Box 11, West Roxbury, Mass.

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Care Research Division, Federal Board for Vocational Training, Washington, D. C.

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1790 Broadway, New York, N. Y.

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Box 272, Lynn, Mass.

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39 Boylston Street, Boston, Mass.

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610 Boatmen's Bank Bldg., St. Louis, Mo.

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246 Summer Street, Boston, Mass.

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23 Saxon Road, Newton Highlands, Mass.

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Care W. H. McElwain, 354 Congress Street, Boston, Mass.

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Gloucester, Mass.

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Room 506, 10 State Street, Boston, Mass.

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7 Circle, Rochelle Park, New Rochelle, N. Y.

F. D. MURDOCK . . . . . . '13
483 Crescent Avenue, Buffalo, N. Y.

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3511 Lowell Street, N. W., Washington, D. C.

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506 Delaware Avenue, Buffalo, N. Y.

ELMER E. DAWSON, JR., Ass't Sec. '14
28 Washington Avenue, Winthrop, Mass.

WILLIAM B. SPENCER . . . . '15
527 No. Grove Street, E. Orange, N.J.

F. P. SCULLY, Ass't Secretary . . '15
5 Exeter Park, Cambridge, Mass.

JAMES M EVANS . . . . . . '16
1916 16th Street, N. W., Washington, D. C.

DONALD B. WEBSTER, Ass't Sec. . '16
18 Clarendon Street, Malden, Mass.

WALTER L. MEDDING . . . . '17
601st Regt., Beaune, France

ARTHUR E. KEATING, Ass't Sec. '17
893 Seaview Av., Bridgeport, Conn.

DAVID M. MACFARLAND . . . '18
626 South High Street, West Chester, Pa.

EUGENE R. SMALLEY . . . . '19
Horsehead Inn, Palmerton, Pa.

LOCAL ALUMNI ASSOCIATIONS

Akron—The M. I. T. Club of Akron, Ohio, W. H. Fleming, Secretary, 350 Wildwood Avenue, Akron, Ohio.
☞ Luncheon—First Saturday of the month at the University Club, Akron, Ohio.

Albany—Technology Club of Eastern New York, Norman A. Lougee, ('11), Secretary, General Electric Co., Consulting Engineer's Laboratory, Schenectady, N. Y.

Atlanta—Atlanta Association M. I. T., W. J. Sayward ('01), Secretary, 609 Chamber of Commerce, Atlanta, Ga.
☞ Luncheon—Fridays at 1 o'clock at Chamber of Commerce Café.

Birmingham—Southeastern Technology Association, F. C. Weiss ('13), Secretary, Alabama Power Co., Birmingham, Ala.
☞ Luncheon—First Wednesday of each month at 1 o'clock at the Hillman.

Boston—Technology Club of Boston, Dr. Robert Seaton Williams ('02), Secretary, Mass. Inst. of Tech., Cambridge, Mass.

Bridgeport—Technology Club of Bridgeport, Howard L. Stone ('14), Secretary, 2814 Main Street, Stratford, Conn.

Buffalo—Technology Club of Buffalo, E. Earle Root ('11), Secretary, Buffalo Standard Ink Corp., Buffalo, N. Y.
☞ Luncheon—First Thursday of month, 12:30 p.m. at Buffalo Chamber of Commerce.

Butte—Technology Association of Montana, C. D. Demond ('93), Secretary-Treasurer, 704 Main Street, Anaconda, Mont.

Charleston, W. Va.—Technology Club of West Virginia, James B. Pierce, Jr. ('11), Secretary-Treasurer, P. O. Box 932, Charleston, W. Va.
☞ Luncheon—Third Saturday in each month at 7.30 p.m. at Edgewood Country Club, Charleston, W. Va.

Chicago—Technology Club of Chicago, Harvey S. Pardee ('09), Secretary-Treasurer, 619 West Jackson Street, Chicago, Ill.
☞ Luncheon—Tuesdays at 12.30 p.m. at Engineers Club, 314 Federal Street, Chicago, Ill.

Chile—Technology Club of Chile, William M. Stevens, ('98), Secretary, Braden Copper Co., Rancagua, Chile.

China—Technology Club of China, William A. Adams ('08), Secretary-Treasurer, 39 Nanking Road, Shanghai, China.
☞ Luncheon— First Saturday of the month, at 12.30, at the Carlton.

Cincinnati—The Cincinnati M. I. T. Club, John M. Hargrave ('12), Secretary, Cincinnati Tool Co., Cincinnati, Ohio.
☞ Luncheon—Tuesdays from 12.00 to 2.00 p.m. at the Schuler Café, 626 Vine Street (2d floor).

Cleveland—Technology Club of Northern Ohio, C. B. Rowley ('12), Secretary, care of H. W. Johns-Manville Co., Superior Avenue, N. W., Cleveland, Ohio.

Connecticut Valley Technology Association, Ernest W. Pelton ('03), Secretary, 77 Forest Street, New Britain, Conn.

Dayton—Dayton Technology Association, W. H. Kiefaber ('08), Secretary-Treasurer, 601 East Monument Ave., Dayton, Ohio.
☞ Luncheon—Tuesdays at 12.15 at the Dayton Engineers Club.

Denver—Rocky Mountain Technology Club, Glenn D. Jones ('13), Secretary, 1910 E. 22d Avenue, Denver, Col.
☞ Luncheon—Wednesdays from 12.30 to 1.30 p.m. at Colorado Electric Club, Chamber of Commerce Bldg., Denver, Col.

Detroit—Detroit Technology Association, Joseph N. French ('11), Secretary-Treasurer, 2098 Woodward Ave., Detroit, Mich.
☞ Luncheon—First Wednesday of each month at 12.30 at the Detroit Board of Commerce.

Duluth—Technology Club of Lake Superior, Duluth, Minn.

Fall River—Technology Club of Fall River, Arthur E. Hirst ('13), Secretary, 55 Madison Street, Fall River, Mass.

Harrisburg—Technology Club of Central Pennsylvania, Farley Gannett ('02), Secretary, Telegraph Bldg., Harrisburg, Pa.

Hartford—Technology Club of Hartford, G. W. Baker ('92), Secretary, Box 983, Hartford, Conn.

Hawaii—Technology Club of Hawaii, Norman Watkins ('98), Secretary, Box 385, Honolulu, T. H.

Indianapolis—Indiana Association M. I. T., Frank B. Shields ('07), Secretary, Fletcher Trust Bldg., Indianapolis, Ind.
☞ Dinner—Second Monday of each month at 6.30 p.m. at the University Club.

Japan—Technology Association of Japan, Takuma Dan ('78), Secretary-Treasurer, 344 Awoyama Harajiku, Tokio, Japan.

Kansas City, Mo.—Southwestern Association M. I. T., Hermann Henrici ('06), Secretary-Treasurer, 222 Commerce Street, Kansas City, Mo.

Lawrence { Technology Club of the Merrimack Valley, John Arthur
Lowell { Collins, Jr. ('97), Secretary, 67 Thorndyke Street, Lawrence, Mass.

Los Angeles—Technology Club of Southern California, Paul E. Jeffers ('12), Secretary, care Mayberry & Parker, Pacific Electric Bldg., Los Angeles, Cal.
☞ Luncheon—First Wednesday of each month at the University Club.

Louisville—Technology Club of Louisville, L. S. Streng ('98), Secretary, Louisville Gas & Electric Co., 311 West Chestnut Street, Louisville, Ky.

Manchester—Technology Club of New Hampshire, Walter D. Davol ('06), Secretary-Treasurer, 819 Elm Street, Manchester, N. H.

Milwaukee—Technology Club of Milwaukee, J. F. Blackie ('04), Secretary, care Milwaukee Coke & Gas Co., Milwaukee, Wis.
☞ Luncheon—Every Thursday noon at the University Club.

Minneapolis—Technology Association of Minnesota, Harold E. Young ('06), Secretary, 15 South 5th Street, Minneapolis, Minn.

Montreal—Technology Club of Lower Canada, E. B. Evans ('06), Secretary, 357 St. Catherine Street, W., Montreal, Canada.

New Bedford—Technology Club of New Bedford, Richard D. Chase ('92), Secretary-Treasurer, 607 Purchase Street, New Bedford, Mass. Secretary *pro tem*, Charles F. Wing, Jr. ('98), 36 Purchase Street, New Bedford, Mass.

New Haven—New Haven County Technology Club, Roy L. Parsell ('14), care Winchester Repeating Arms Co., New Haven, Conn.

New Orleans—Technology Club of the South, J. H. O'Neil ('10), 936 Arabella Avenue, New Orleans, La.

New York—Technology Club of New York, Frank P. Montgomery ('02), Secretary, 17 Gramercy Park, New York, N. Y.

Niagara Falls—Niagara Falls Technology Club, Norman Duffett ('11), care Union Carbide Co., Niagara Falls, N. Y.

Panama—Technology Club of Panama, W. F. Grimes, Jr. ('08), Balboa Heights, Canal Zone.

Paris—Technology Club of Paris, Director, Rev. George Crocker Gibbs ('11), 8 Rue de Richelieu, Palace Royal Hotel, near Place du Theatre.

Peking—Technology Club of Peking, Ziang Yien Chow ('15), Bureau of Municipal Administration, Department of Surveying, Peking, China.

Philadelphia—Technology Club of Philadelphia, Headquarters, Engineers Club, 1317 Spruce Street, N. A. White ('06), Secretary-Treasurer, Wenonah, N. J.

Pittsburgh—Pittsburgh Association M. I. T., Francis Foote ('16), Secretary, Jones Bldg., Pittsburgh, Pa.

Pittsfield—Berkshire County Alumni Association of M. I. T., Earl E. Ferry ('12), Secretary, 84 Elizabeth Street, Pittsfield, Mass.

Portland, Maine—Technology Association of Maine, Joseph A. Warren ('91), Secretary, Cumberland Mills, Maine.

Portland, Oregon—Technology Association of Oregon, C. A. Merriam ('06), Secretary-Treasurer, Worcester Bldg., Portland, Oregon.

☞ Luncheon—Every noon at the Hazelwood Lunch, Portland, Ore.

Providence—Technology Club of Rhode Island, Clarence L. Hussey ('08), Secretary-Treasurer, 100 High Service Avenue, Providence, R. I.

Rochester—Technology Club of Rochester, Virgil M. Palmer ('03), Secretary, Kodak Park Works, Eastman Kodak Co., Rochester, N. Y.

St. Louis—St. Louis Society of the M. I. T., Amasa M. Holcombe ('04), Secretary-Treasurer, Office of Chief of O. D., Washington, D. C.

Salt Lake City—Intermountain Technology Association, Walter H. Trask, Jr. ('06), Secretary-Treasurer, University Club, Salt Lake City, Utah.

San Francisco—Technology Association of Northern California, Headquarters, Room 1107, 833 Market Street, San Francisco, Cal., Capt. Howard F. Clark ('12), Secretary-Treasurer, 3d Corps, A. P. O. 784, A. E. F. John R. Brownell ('01), Secretary *pro tem*, 525 Market Street, San Francisco, Cal.

☞ Luncheon—No regular date, but quickly arranged on occasion.

Seattle—Technology Club of Puget Sound, H. H. Whithed ('11), Secretary-Treasurer, c/o P. S. T. L. & P. Co., Seattle, Wash.

☞ Luncheon—Third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle, Wash.

Spokane—Inland Empire Association of the M. I. T.

Springfield—Technology Club of Springfield, R. C. Albro ('07), Secretary-Treasurer, 499 Main Street, c/o Fred T. Ley & Co., Inc., Springfield, Mass.

Syracuse—M. I. T. Club of Central New York, J. S. Barnes ('08), Secretary, Merrell & Soule Co., Syracuse, N. Y.

Urbana—Tech Club of the University of Illinois, Arthur C. Willard ('04), Secretary, University of Illinois, Urbana, Illinois.

Washington—Washington Society of the M. I. T., E. J. Casselman ('15), Secretary, 3519 Lowell Street, N. W., Washington, D. C.

Worcester—Technology Association of Worcester County, Louis E. Vaughan ('02), Secretary-Treasurer, 4 Fenimore Road, Worcester, Mass.

SUSTAINING MEMBERS OF THE ALUMNI ASSOCIATION

Louis W. Adams, '03
*Charles W. Baker, '78
James C. T. Baldwin, '88
Spaulding Bartlett, '90
Zenas W. Bliss, '89
Philip D. Borden, '73
James C. Boyd, '93
Henry G. Bradlee, '91
Frank A. Browne, '06
George O. Carpenter, '73
George E. Claflin, '88
E. Pomeroy Collier, '78
Joseph W. Crowell, '04
Harry H. Cutler, '81
Daniel J. Danker, '15
William C. Dart, '91
Herbert N. Dawes, '93
George A. Draper, '76
Nathan Durfee, '89
Theodore A. Foque, '88
George E. Hale, '90
George W. Hamilton, '80
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Charles F. Hopewell, '94
Arthur T. Hopkins, '97
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Clarence M. Joyce, '03
Charles W. Kellogg, Jr., '02
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Eugene H. Laws, '96
Richard W. Lodge, '79
George Holt Lukes, '92
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Miss Susan Minns, '81

James P. Munroe, '82
Atwood C. Page, '10
William B. Page, '93
William I. Palmer, '91
William H. Pratt, '94
Raymond B. Price, '94
Charles W. Ricker, '91
C. Snelling Robinson, '84
Dwight P. Robinson, '92
Allen H. Rogers, '90
J. W. Rollins, '78
Henry F. Ross, '82
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William O. Sawtelle, '99
Alfred H. Sawyer, '88
Richard E. Schmidt, 87.
George O. Schneller, '00
Lewis J. Seidensticker, '98
Henry D. Shute, '92
Joseph C. Smith, '88
Frank A. Smythe, '89
George F. Starbuck, '97
William C. Stearns, '71
Gerard Swope, '95
Henry P. Talbot, '85
Henry H. Tozier, '96
Leonard Tufts, '94
Etheredge Walker, '99
Joseph E. Walworth, '95
Leonard C. Wason, '91
Belvin T. Williston, '77
Frederick W. Wood, '77
Henry E. Worcester, '97
George M. Yorke, '93
Albert G. Zimmerman, '93

April 1, 1919

*Deceased

LIFE MEMBERS

1868

Eli Forbes

1869

Edward D. Adams
Howard A. Carson

1870

Frederick Brooks
Charles R. Cross
Charles W. Hinman

1871

Francis Henry Appleton
Walter Channing
E. W. Rollins
Charles F. Stone

1872

C. Frank Allen
Frederic A. Emmerton

1873

Charles T. Carruth
Robert A. Shailer
Francis H. Williams

1874

John C. Chase
Samuel P. Colt
J. S. Emerson
E. S. Shaw

1875

James L. Arnott
Charles W. Goodale
Thomas Hibbard
Wilfred Lewis
Samuel J. Mixter
Benjamin A. Oxnard
William H. Shockley
Abbott E. Slade
W. R. Webster

1876

J. R. Freeman
John B. Henck
Charles W. Hubbard
T. J. Lewis
C. T. Main
Arthur L. Mills

1877

Charles S. Bachelder
George J. Baldwin
Warren E. Fairbanks
George W. Kittredge
H. C. Southworth
George F. Swain
Edward G. Taber

1878

W. B. Allbright
Ion Lewis
P. Schwamb
William D. Sohier

1879

George F. Blake
F. S. Coffin
R. M. Hosea
Louis P. Howe
E. C. Miller
W. H. Pickering
W. S. Stearns
A. M. Waitt

1880

Edwin E. Chase

1881

John H. Allen
Frank Angier Amers
Frank H. Briggs
Godfrey L. Cabot
G. A. Mower
Harold E. Stearns
Henry N. Sweet
George R Wallace
Arthur Winslow

1882

W. B. Ayer
Lloyd G. Lewis
Walter B. Snow

1883

Ernest A. Clemens
Horace B. Gale
Frank Tenney
G. R. Underwood
David Wesson

1884

Barrett L. Chandler
Roscoe L. Chase
Coleman du Pont
A. H. Gill
Franklin B. Richards
J. Peterson Ryder
H. W. Tyler

1885

David Baker
Charles H. Bartlett
Edward R. Benton
Edward H. Dewson
Charles W. Eaton
Mary E. Jones
Donald MacRae
Everett Morss
Andrew G. Pierce
Nathaniel G. Robertson

1886

C. Belle Kenney
Frank L. Locke
A. R. McKim
Henry P. Merriam
Edward F. Miller
E. L. Pierce, Jr.
A. G. Robbins

1887

Henry B. Brainerd
J. A. Cameron
Benjamin C. Lane
Joseph P. Loud
Frank A. Merrill
Philip A. Mosman
G. W. Patterson
Herbert A. Richardson
Franz H. Schwarz
Frank E. Shepard

1888

William G. Besler
Henry Forbes Bigelow
John Blodgett
Fred B. Cole
Guy W. Currier
George C. Dempsey
Charles L. Holmes
Frank M. James
Alexander H. Jarecki
Arthur W. Jones
Frank A. Moore
John C. Runkle
Walter K. Shaw
Joseph Cooke Smith
Charles A. Stone
John M. Sully
Marion Talbot
Edwin S. Webster
Arthur S. Williams

1889

A. B. Bellows
C. N. Borden
Frank L. Dame
Arthur L. Davis
Francis R. Hart
George C. Kaufman
Arthur D. Kinsman
L. H. Kunhardt
John W. Linzee, Jr.
Sanford E. Thompson
Frank H. Thorp

1890

Charles H. Alden
Frank W. Atwood
Cyrus C. Babb
E. H. Brownell
James Clark, Jr.
William H. Fenn
George L. Gilmore
Harry A. Kennicott
Frederick Metcalf
Joseph K. Noyes
William R. Peyton
Schuyler Schieffelin
H. C. Slater
W. R. Whitney

1891

A. H. Alley
J. H. Birks
H. C. Bradley
George A. Campbell
J. Linfield Damon, Jr.
C. F. Hammond
W. C. Richardson
Ambrose Walker
Charles P. Wetherbee
Salmon W. Wilder
F. A. Wilson

1892

Edward P. Gill
Howard Gilmore
Harry Adams Harwood
A. S. Heywood
William R. Kales
George H. May
Leonard Metcalf
Eugene E. Pettee
Edmund Q. Sylvester
George P. Tallant
Murray Warner
Henry S. Webb
Channing McG. Wells

1893

A. Farwell Bemis
Samuel Parker Bremer
Leonard B. Buchanan
W. W. Carter
W. W. Crosby
F. W. Fabyan
Frederic H. Fay
Adolph Lomb
Frederic W. Lord
George E. Merrill
George Moore
H. A. Morss
James H. Reed

1894

Charles G. Abbot
George R. Beardsell
Mason S. Chace
T. Clive Davies
Walter E. Piper
Samuel C. Prescott
Anthony M. Robeson
F. A. Schiertz
William A. Soley
Joseph E. Thropp, Jr.

1895

A. L. Canfield
John Williamson Cooke
Henry M. Crane
Alfred L. Dejonge
E. E. Denison
A. D. Fuller
Francis C. Green
Reid McManus
Charles H. Parker
Walter C. Powers
Frederick L. Richards
Walter J. Rickey
Louis K. Rourke
Harold N. Rust
Robert K. Sheppard
Sturgis H. Thorndike
Frederick Adams Woods
Charles F. Wray

1896

Francis M. Conant
N. H. Daniels
M. L. Fuller
Eugene C. Hultman
Benjamin Hurd
Charles Gilman Hyde
P. W. Litchfield
George E. Merryweather
D. A. Richardson
Frederick F. Schaller
Esther Stone
John H. Willis

1897

Bernard Barrows
John S. Boyd
Luzerne S. Cowles
Frederick W. Fuller
J. Monroe Gilmore
Walter Hunphreys
Harry B. Hunt
Arthur L. Jennings
Hugh K. Moore
Edwin Read Olin
A. H. Pugh
Luther R. Sawin
Oren B. Smith

1898

Joseph Bancroft
Dickson Q. Brown
Durand Churchill
Paul F. Johnson
Van Rensselaer Lansingh
Percival Hall Lombard
Clarendon Nickerson
Shirley S. Philbrick
Homer E. Sargent, Jr.
Frank A. Spaulding
E. A. Weimer
Paul B. Wesson
Ralph E. Wilder

1899

George E. Bergstrom
Carroll W. Brown
Frederick Otis Clapp
George Dana Emerson
Clancey M. Lewis
Benjamin E. Morse
Dudley M. Pray
Haven Sawyer
James Alexander Stetson

1900

J. H. Batcheller
Edward E. Bugbee
Karl Burroughs
F. H. Cooke
William A. Dorey
E. G. Gallagher
Arthur L. Hamilton
Robert H. Leach
A. C. Melcher
Russell Suter
Harry M. Thayer
George A. Tweedy

1901

Edward Henry Callahan
Fred W. Connolly
W. Fred Davidson
Archibald Lee Klieves
Ralph S. Loring
Nathaniel K. B. Patch
Francis W. Puckey

1902

Cecil B. Annett
Thomas W. Foote
William R. Greeley
Russell B. Lowe
Charles G. Mixter
William Jason Mixter
Philip Coombs Pearson
Burton G. Philbrick
Louis E. Vaughan

1903

Chester S. Aldrich
A. F. Bennett
William Perkins Cross
Frederic A. Eustis
Montague Ferry
Crosby Hewitt
Charles J. McIntosh
Roderick J. MacGregor
Paul R. Parker

1904

Llewellyn Bixby
Humphrey Matthew Haley
Harry Stillman Kendall
Mrs. Stanley McCormick
Fred K. Merriman

1905

Chester Allen
Roy Hutchins Allen
Leslie Clough
T. F. Geraghty
William S. Gouinlock
E. M. Graham
James A. Newlands

1906

Simeon Carlyle Allen
John W. Anderson
Edmund S. Campbell
Andrew Fisher, Jr.
Wallace R. Hall
Benjamin Madero
Edward M. Read
Clifford R. Wilfley

1907

Andrew W. Hull
Milton Turnley Lightner
A. P. Mansfield
W. Watters Pagon

1908

Everett Jefts Beede
Claude O. Brown
Philip C. Brown
Maurice E. Denny
Herbert T. Gerrish
Irving M. Guilford
Lucius F. Hallett
Frank E. Ludington
J. Worth Maxwell
Frank E. Mott
Frank J. Robinson
Tsok Kai Tse
Laurence T. Walker
Rudolph B. Weiler

1909

Matthews Fletcher
Carl William Gram
W. Duncan Greene
Tetsutaro Hasegawa
Charles R. Main
Lincoln Mayo
Mrs. Carroll Paul
Chester H. Pope

1910

Harry P. Trevithick

1913

Charles R. Hill

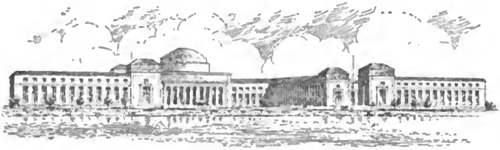
1914

Dana H. N. Mayo

1918

Amory L. Williams

THE ALUMNI DINNER, MARCH 1, 1919, AT THE WALKER MEMORIAL



The Technology Review

Published at Cambridge "A" Branch, Boston, Mass.
Robert E. Rogers, *Editor*, Massachusetts Institute of Technology, Cambridge, Mass.

Vol. XXI APRIL, 1919 No. 2

THE ALUMNI DINNER

To you alumni of Technology who, scattered over the world, could not get home to the annual dinner on Saturday, March 1, the big love feast in the home which you all gave to the undergraduates who have but now taken possession of it—greeting!

There were a great many good things said that Saturday evening in the Walker Memorial, things which you, as Tech men, ought to know and will want to know. Nearly seven hundred of us—the largest "get together" since the Symphony Hall dinner—heard them and were enthusiastic, and now it is your turn.

The Review thought it worth while enough to get a verbatim report of what was said, and we therefore commend the following pages to your real attention. Read President Henry Morss's report of stewardship and learn what the Association has done to help win the war; read Governor Coolidge's tribute to the Institute; read Walter Gordon Merritt's stirring appeal for right and justice and arbitration in our labor questions—an address the most sensational of the evening and received with marked enthusiasm.

And above all, read and ponder Dr. Maclaurin's statement of the case for the greater Institute, learn our difficulties and problems and get yourself in the frame of mind to do something about it when your time comes to do your bit.

It was a great evening!

WHAT IT LOOKED LIKE

Those of us who had seen the Walker Memorial only as a conglomerate piece of building, or even as a formal, shipshape barracks for the naval aviators, hardly recognized it on Saturday, March 1, for all afternoon the place was filled with old boys, come back to meet classmates at the reunions scheduled in the offices of the activities, or to enjoy themselves, as if they were undergraduates again with the facilities the old Union never had. The last naval aviator had gone a month before, and since that time the Memorial had been scrubbed and polished and painted and curtained and decked out with comfortable furniture, the activities had moved into their comfortable little offices on the top floor, and the whole Institute had attended a grand jubilee smoker as a symbol of taking possession, a real housewarming, at which the head of the student Institute Committee had been given the charter of the alumni's gift as a perpetual privilege to the boys who expect to be alumni some day. (There's a good story about that party somewhere else in this issue.)

In the comfortable lounging rooms on the second floor, with their clubby easy chairs and tables, the older classes had their meetings, and the younger crowded into the activity offices. But the real center of activity seemed to be in the basement, where the old grads mixed with the boys of today in the new, large, brightly lighted pool room, in the long bowling alleys and, especially, in the stem-winding, self-refillable shooting galleries where many a man just out of the olive drab showed that he hadn't forgotten what he had learned on the ranges and on the other side. Meanwhile, beginning at five, a brisk band shook the echoes in the big, barny gymnasium on the top floor, where all those who couldn't squeeze into the offices and were tired of waiting for a chance at the sports stood around and met all comers—socially, of course—and tried to talk above the strains of a reverberating jazz. Although, naturally, the bulk of the attendance came from the neighborhood and Massachusetts and New England, there were delegations from New York and even from Washington and points south.

At seven dinner started. There were nearly seven hundred seated at the individual class tables, a long array of alumni and officers whose names are dear to Institute men at the head table, under the bust of General Walker, the band again to keep singing going, Institute banners and all the class banners in their orderly color combinations hung around from the balcony where late the tired aviator babbled formulae in his sleep, and a battalion of student waiters served quickly and well the simple but excellent dinner.

One thing the notables lost out on! In front of the bust of General Walker descended a sheet and on that sheet were displayed cartoon movies about the little boy and his dog and the ostrich, and the tramp and his dog and the bucking broncho—and the notables craned their necks and got astigmatism trying to see what the seven hundred were roaring at. But they got their innings when Dennison led the songs—which he did in a very athletic manner—and to see Professor Kennelly, who still retains traces of an English environment happily almost sloughed off, puzzling out the lyric of "Yip-I-addy-I-ay" and then singing it as if he were little Tommy Tucker on a well-known occasion, was in itself worth the price of admission. Governor Coolidge didn't sing. We think he would make a better governor if he would. But maybe he attends too many dinners to risk getting the habit.

There was one interlude to the speeches which to all present was perhaps the most significant of the evening. Along the sides of the hall sat the members of the classes of 1918 and 1919, who had received their degrees, but had not yet been officially welcomed into the body of alumni, as the alumni, since the war started, had not had any occasion wherein they might be welcomed. So after the Governor had spoken, the members of each class filed up through the center of the hall, to the accompaniment of cheers and applause from the older brothers who stood to honor them, and were welcomed without speech or ceremony by President Morss into the great body which the diners represented, and were given their banners, which at once were hauled up to the balcony, next to those of '16 and '17, thus completing the membership till 1920, when the next class will be received.

And they, as well as the speakers of the evening, were cheered prettily by the alumnae—the co-eds of the past, who, as Mr. Morss said, were just as good Tech men as the rest and got cheered for it—who sat with Mrs. Maclaurin at two brilliant tables down in front.

So much for the mise en scene! The coffee is gulped, the cigars lighted, the chairs pushed back, the waiters fold their serving tables like the Arabs and silently steal away—President Morss, beaming, rises to act as toastmaster and to give account of his stewardship. Gentlemen, President Henry A. Morss of the Alumni Association!

PRESIDENT MORSS: A year ago when we held the dinner here we dedicated this building. Tonight, we are here for what might be called a "housewarming." As you all know, we could not have our housewarming before because the building has been in the service of the government.

This meeting marks the first dinner since the new order of things as to the year of the Association. My predecessor, Mr. Hart, had the unique experience of serving a single term of a year and a half. Now, the year has been changed from the calendar year, so that my term of office, and the succeeding presidents', will end on the last of May. It seems to me that this is a little awkward. First, if we are to have graduation and alumni celebrations, I would naturally go out of office on the last of May, and the celebrations would be in charge of the incoming president the first week in June. It would be awkward for me to arrange a celebration for him to run, and it would be more awkward for him to have me arrange it for him. I think we shall have to interpret the by-law as it was interpreted before—that the outgoing president holds office until after the commencement celebrations.

The Alumni Association appears to be in a flourishing condition. If anybody doubts the interest of the Alumni Association in the Institute, I wish that doubter were here tonight. So far as I know, we never had so large a meeting as this as an Alumni function before. There are something like six hundred and seventy people here tonight. The membership of the Alumni is still growing. We get those who graduate in the natural order of events under the by-laws, and during the last year we have elected a great many associate members. We have two more Local Alumni Associations than a year ago, one at New Haven and one in West Virginia.

The finances of the Association are in very good shape. Two or three years ago the secretary and treasurer changed from the keeper of a deficit to the keeper of a fund, and I am glad to say that he still has a fund in his charge.

The committees of the Association have been doing their work to a greater or lesser degree during the past year, but of course they have been somewhat handicapped by the absence of men; also some of the committees have not been able to do anything owing to the war conditions, and their work was put aside for a while. The alumni fund, to which you have all subscribed, and with which this building has been partly paid for, amounts now to about $598,000 paid in, and the income has amounted to about $23,000 more.

Last winter and spring the work of the Alumni Council was not the same as it had been previously, owing to the war conditions. These war conditions affected the Institute and they affected the membership of the Alumni Association and, of course, the Council. The service schools here were a large factor. They used this building, they used some parts of the other buildings, and they upset things a good deal. For something over a year we have had no field manager. Litchfield, '85, resigned on account of work he was going to do in Washington and we have not yet succeeded in getting a new manager. The executive committee chose Eaton, '85, but he says that he cannot accept. He has suggested for a field manager an excellent man, if we can get him, George Crocker Gibbs, now in charge of the Technology Bureau at the American University Union in Paris. (Great applause.)

The Council had one or two questions put before it on which it acted. The Technology Clubs Associated were planning a meeting in Philadelphia about a year ago. Owing to war conditions, the fact that everybody was busy, and the fact that the railroads were overcrowded, etc., they wrote to the Council for an opinion on the desirability of holding that meeting, and the Council voted that it was not advisable to hold it. The proposition as to whether a Tech Show should be held last year was referred to the Council, and the Council voted in favor of holding the Tech Show. It felt that such activities as the Tech Show were good things for the undergraduates and it was too bad a thing to let it go by. We also had the very good excuse that what the Tech Show cleared in money was paid over to the Tech Bureau, a war measure.

A good many of the committees of the Council have been disorganized by men being away. This became so serious a matter that the Council voted in the spring that if any committee did not have a quorum those who were left should join with the Executive Committee of the Alumni Association, and that the combination would do the work.

There was no formal alumni celebration last June. There was a graduation, and the members of the Alumni Association in this vicinity were sent a notice that the naval students would give a dress parade out on the parade grounds on the afternoon of graduation, and they were invited to attend. This year when the Council first met it, of course, was confronted with the problem of the S. A. T. C., which the government had instituted here at Technology. About the only problem which the Council could handle to advantage in connection with the S. A. T. C. was the recreation room which was provided when the barracks were built. We thought, at first, that this recreation room should be in charge of a Tech man and should be run by the Alumni Association, but as we studied the matter we found that there were serious difficulties, and we finally decided to turn the charge of the recreation room over to the Young Men's Christian Association, making it very clear to them that we would also welcome at all times any work, any activity, or anything which the Knights of Columbus, the Hebrew Association or anybody else wanted to do for our men. This went through very nicely.

At one meeting of the Council, the first meeting this year, we had Lansingh's report on the Technology Bureau in Paris. It was an excellent report, but quite long, and since it has been published in the TECHNOLOGY REVIEW, where you all have had a chance to read it, I am not going to dwell upon that.

On the screen tonight you have been shown various statistics. That was to save me the trouble of giving them to you, and it gives you a better chance to study them than if I recited them. But there was one thing shown which I wish to emphasize. The records show that there have been 2725 Technology men in actual service. In the Expeditionary Forces there have been 991. What seems to me very remarkable and a great compliment to Technology, is the fact that out of the 2725, 1834 held commissions; that is, 69 per cent. I think that is a wonderful showing and one of which we may all be proud. The Council voted at its last meeting that a committee should be appointed to work with a committee of the Faculty to publish a book which should be a record of all Technology service in the war—the service of the institution and the service of the various men. This would include not only those officially in the service, but we hope it may include some description, at least, of the men who are doing war work for the government. Of course, this number was very large and the work some of them were doing was very important. Also, it was voted to have a committee appointed to work with a similar committee of the Corporation for a memorial to those men who died in the war.

The activities of the Council have perhaps been a little different this year from other years. In former years we have had to act to a degree as advisors in the running of the Institute. During the past year, we have only discussed one matter of that sort. Dr. Maclaurin came to the Council Meeting and brought up the subject of what he called, "Reconstruction at the Institute." He told us that the reconstruction meant particularly reconstruction of the courses. He asked of the Council their opinion as to the need and desirability of broadening the course; that is, of giving perhaps classical, or at any rate, courses outside of the strictly engineering courses. I think it was almost the unanimous opinion of the men present at that meeting that the Institute men were a little inclined to be narrow and that the studies should be changed so as, if possible, to have a good, broadening effect.

Our relations with the undergraduates have been somewhat interesting. Undergraduate activities last year were a good deal handicapped by war conditions, and beginning in October were almost eliminated. The S. A. T. C. kept them so busy that they had very little chance to carry on their ordinary activities. If there were none, of course the Council of the Alumni Association could not help them; but almost before we knew it the S. A. T. C. came to an end. In December news came to me that the students were considering the re-establishment of their various activities and what could the Alumni Association do about it? We had a meeting of such members of the various advisory councils as were around here with several of the students, and we were very interested to find that the students were planning to start their activities promptly on the first of January. At that meeting the matter of the student tax came up. As the student tax had not been noted in the catalogue, Dr. Maclaurin was doubtful about the propriety of having the student tax paid. At that meeting a plan was arranged by which all of the students were obliged to vote as to whether they wished the student tax or not when they registered in January, and there was almost an overwhelming vote in favor of the tax.

After the S. A. T. C. was abandoned and before the student activities got going there were signs of trouble. You probably read in the newspapers, perhaps, about the near-riot which occurred out here in the great court one Saturday. Some of us were a good deal alarmed at that demonstration; and I am glad to say that I had a chance to make a few remarks about it at a big smoker in this hall on the last of January. The students had a smoker here at which there were over sixteen hundred men. There was considerable confusion owing to the large number, but I told them that the alumni did not think such actions were according to tradition. I also told them that I believed this was simply an overflow of spirits due to a lack of proper activities. On that evening the Dean, much to the pleasure of the students, announced that the Alumni Council had voted that there should be a field day in the spring to take the place of the field day usually held in the fall. This, I believe, will be held. At that smoker the students wanted me to present this building to them, and I told them that, representing the Alumni Association with such authority as it had and believing that the students were able to govern themselves properly, I granted to them the occupancy and use of this building subject to such rules and regulations as the authorities of the Institute might deem advisable. I handed the chairman of the Institute Committee, the students' representative, a scroll showing this grant, and this will be posted in the building so that every one may see it. The Dean has suggested that some formality of presenting the building to the students should be carried out each year, as it would make the students appreciate the fact that the Alumni were interested in them. It will be necessary to do this each year on account of changes in the Institute body.

Probably the most important work of the Alumni Association has been the war work through its Committee on National Defense. The committee has raised some $49,000, of which $17,000 was subscribed by the members of the corporation. They have so far spent about $41,000. $18,000 was paid to the Woman's Auxiliary and $11,500 has been sent to the Tech Bureau in Paris. It will apparently be necessary to continue the Tech Bureau in Paris for at least the balance of this year, and the cost to maintain it is about $1000 per month. The Tech Bureau, as you know, is a part of the American University Union, and it has been of great service to the men "over there." Lansingh's report tells a good many details of that, and I think you have all been interested in what they are doing over there.

A very important part of the work of the Committee on National Service has been carried on by the Woman's Auxiliary, with headquarters in the Rogers Building. As you all know, when doing something for college men abroad was first mentioned, Mrs. Cunningham came forward and urged that Tech take up work for its men, and she subscribed most liberally in order that the work might be started promptly. Mrs. Cunningham has been assisted by Mrs. Bigelow, Mrs. Sedgwick, Mrs. Lord, Miss Walker, and many other women. I would like to say that these women are fully as good "Tech men" as we men are. (Applause.) Mrs. Sedgwick has had charge of the Workroom, which has sent all sorts of necessary articles to the men in Europe. The Auxiliary has kept records of the men in service, has had a system of communication with the men in service and with their families here. It has superintended the collection and distribution of books. Members of the Woman's Auxiliary have done hostess work in the service schools here at the Institute. They have also done hospital visiting. I wish I could express the appreciation which this Association should have for this wonderful work done by these woman. I have an idea that most of us never will appreciate it unless perhaps we get an account from some man who has been over on the other side and who really appreciates what they have done.

Owing to war conditions, two rather curious things have happened. The Class of '18 graduated last June and has never been formally welcomed into the Alumni Association. Owing to the intensive training caused by war conditions, the Class of '19, due to graduate next June, was graduated last October, and they too, have not been officially welcomed into the Association. I did write a letter of welcome to both of these classes, but tonight we wish to welcome them formally—to have them understand what the Alumni Association may mean to them and what their connection with it may mean to the Institute. I have here the banners for the Classes of '18 and '19, and if the members of those classes will pass here in front of the table I will present the banners to the two presidents.

At this point the alumni of '18 and '19 marched up and were given their banners.

President Morss: The Corporation of the Institute is known as a self-perpetuating body; that is, it elects its own members; but this is not wholly true, for it does not elect all of its members. Last November the people of Massachusetts took it upon themselves to elect the gentleman who sits on my right to membership in the Corporation, and a few other duties. We all know the Corporation is a powerful body, but with all of its power the Alumni Association gets ahead of it in one way. I mean that the Alumni Association, for many years past, has succeeded in persuading the Governor to come to at least one of its dinners during his administration, while, so far as I know, no Chief Executive has as yet attended a meeting of the Corporation. In spite of past history, I dare to hope that our present Governor will attend at least one meeting of the Corporation. I believe if he would, and particularly if he could attend the meeting where our president presents his annual report, he would hear something of great interest to him.

Our first speaker this evening is the most recently elected member of our Corporation. He is a college man among college men, coming from our much esteemed sister college, Amherst. We are honored by the presence of His Excellency, Calvin Coolidge, Governor of the Commonwealth of Massachusetts.

Governor Coolidge: Mr. Toastmaster, Mr. President, Guests, and Alumni of the Massachusetts Institute of Technology: Although I may not address you as fellow alumni, I suppose I am privileged to address the trustees as fellow trustees.

In accordance with what the toastmaster has told you of his long established custom, I have come here to bring you greetings of the Commonwealth of Massachusetts. That would be what you would expect, I know, of your commonwealth, because it has long been officially and through its government a supporter of the higher institutions of learning. When our first university was established, less than twenty years after the landing of the Pilgrims, the general court made a generous appropriation for its support. There is a tradition that the money was never paid over; but at least they showed their approbation of the project, and any one who has had any of the responsibilities of government upon him for the past two years would be glad to come here to express the great debt of gratitude that is due to this Institution, not only for the splendid support that its alumni—and I might almost say the undergraduates—have given to the government, but to the splendid work you have done here in training young men for war service. It is a pleasure, therefore, for me to come here and express to you the thanks of the government in that direction. But that, perhaps, is only incidental. The work of carrying on the war was something that came to all of us and we knew that this Institution would do its full share in supporting the government. But we owe it a debt of gratitude, not only for the work it has done in war, but even a greater debt for the obligations it has put upon us through its service to the public and to the commonwealth in times of peace. That is especially so in relation to the commonwealth of Massachusetts, and I might say of all New England in general.

This is not a part of the nation that is pre-eminently blessed with natural resources. Other places surpass us greatly in that respect, in their production of minerals or in the fertility of their soil. If we are to have any prosperity here it will be due in part to the favors we receive from transportation, both by land and by water, and in part from our ability as manufacturers, as a people who are engaged in the great industries of the nation; and it is because of the skill and enterprise of the people of Massachusetts that we are able to maintain ourselves in competition with the rest of the nation and in competition with the nations abroad. For that purpose, we are dependent upon the education, the skill, the intelligence and resourcefulness of our people; and it is for the purpose of so maintaining ourselves that the government has felt warranted in supporting, as it has done, such institutions as your Institute of Technology. It is not so old as some of your sister institutions, but in the great work it has been doing it has played a part most honorable and successful in the upbuilding of the commonwealth of Massachusetts. So, as the Chief Executive of this commonwealth, I am glad to come here and express to you our thanks and our appreciation of the work that you are doing, and if Massachusetts is able to maintain itself, it will be because of the example and because of the help that we are to secure from just such institutions and just such activities as are represented here.

You have, no doubt, noticed, as I have, the reports that come from day to day of unrest in some parts of this commonwealth of ours. I do not believe that they are the cause of anything like discouragement on our part. I do not believe they are going to amount to very much. They are not representative of the attitude of the people of this commonwealth, and they are not representative of what the great mass and body of our population wants, whatever may be the case in some other part of the world. If, at any time, any of you doubt my opinion in that respect, I wish that you would come up to Beacon Hill and look about you and see spread out before you the great number of schoolhouses; see the innumerable church spires; see the towers of the higher institutions of learning; and then look out across the Charles River where you will see rising majestically the buildings of your own institution, standing as witnesses and bearing testimony to the ability of Massachusetts to maintain itself, and to its desire to carry forward the cause of civilization.

President Morss: It seems to me superfluous to introduce the next speaker to this company. His name is Richard; if his name were John, I might simply say, "Speak for yourself, John," as he has so often and so kindly done in the past; but you know him as well as I do; you appreciate his ability and judgment as well as I do; you have confidence in him as I have; you respect him as I do; you love him as I do. Why say more? Dr. Maclaurin.

Dr. Maclaurin was greeted with prolonged cheering, which evidently affected him.

Dr. Maclaurin: Mr. President, ladies and gentlemen: Need I say that it is always a pleasure to me to meet a representative group of Technology men and to get from them the inspiration that comes from seeing their hopeful outlook, and listening, as I have done tonight, to their generous expressions of appreciation.

Now, you expect your president, on occasions such as this, to say something of the achievements in the year that has gone since we last met; but I feel myself debarred from entering upon that subject tonight because the year that has passed has been altogether too memorable in the life of Technology as in the life of the nation to lend itself to the kind of treatment that must be given within the limits of an after-dinner speech.

The year that has passed has been pre-eminently, of course, the year of the Great War and the Great Peace. I rejoice with you that in that great war and the prosecution of that great war and the bringing of the great peace out of that, Technology alumni have played a worthy part. I rejoice, too, that the activities of the alumni have had their fitting reflection in what has gone on quietly within the walls of the Institute itself. I think your president did well to direct your attention, as he did, to those impressive figures—the three thousand alumni who were actually found in active service. Think of it! Three thousand men!—a number which meant practically all available within the normal limits of age that were prescribed, all that were available when you set aside that large number who were debarred from active service, or who served in the capacity of experts in the indispensable industries. I think your president did well to speak with pride of the fact that out of that three thousand alumni nearly seventy per cent were officers. You should bear those numbers in your minds and hearts with pride, for they represent a splendid achievement. You should be proud of them and proud of your fellows, not only for the number of their services but for their quality. Of course, you will keep in your hearts always the special meed of praise and respect for that noble band of Technology alumni who paid the last full measure of their devotion to the great cause. Inevitably in time you will raise a memorial to the mighty dead. Although this is not the time to think of it, it is, I think, the time to begin to think of the form that it shall take, but not the time to think of raising it. Your president has told you that a committee of the alumni had been set up to co-operate with a similar committee of the Corporation to think of that project, and I hope that any of you with good ideas will pass them along to that committee. The memorial need not be costly, but it certainly must not be paltry, and it must not consist of anything that would easily go out of date. It must be as imperishable as the fame of the men it commemorates.

As I am barred from looking into the past, I naturally look to the future. I want to tell you something of the problems of the future as they present themselves to my mind. I think one thing is abundantly clear—that the war has greatly enhanced the prestige of Technology. Technology alumni are men trained to do things, and in the critical times such as those through which we have passed and are still to pass the men trained to do things are the men most in demand. As a result of the war you will find, I think, that those types of education will be checked which lack fixity and clarity of purpose; and those institutions which seem to grope toward vague ends will cease to be attractive as before and they will constantly be pushed by the institutions, of which Technology is a type, that know very clearly or see very clearly what they are trying to do, and do it. I hope you realize the significance of the figures to which your president referred and which were thrown on the screen. There are nearly two thousand students at the Institute today, although the war is hardly over and although there are scarcely any seniors, owing to the conditions which already have been described. The Freshman class now consists of nearly nine hundred students, while a little over five hundred was a maximum before the war. If this goes on, we shall have to face the problem not of two thousand, but of three or four thousand students within a few years. Concerning the difficulties of that problem I may presume upon your patience.

Just what are those difficulties and what is the real problem? I think you gentlemen recognize clearly enough that any institution like ours, or indeed any educational institution, must require primarily three things: suitable buildings, an appropriate organization to guide and teach, and enough money. The buildings you know, or should know. They have recently been dedicated in your presence to the great ends for which they were designed. They were designed with the idea of providing easily for two thousand students and for twenty-five hundred in a pinch. All indications show that we shall have at least twenty-five hundred next year, so we will have to begin pinching right away. Within a year from now we will begin facing absolutely the limiting of our numbers or the extending of our plant. Organization, the second thing, is the all-important one. I need not remind you that it is infinitely more important to Technology than any other school to have the right kind of organization, imbued with the right spirit and bearing the right traditions. The organization of Technology, adequate as it is to care for two thousand students, could easily be extended without any very large or proportional expense to care for three thousand students. The one real problem is money, the financial problem. There is nothing new in presidents speaking of financial problems, and I am not proposing any appeal for funds: I simply want you to understand what this financial problem is. It is curiously misunderstood by the community and even by the alumni. There has been some talk in the newspapers within the past few months of the crowded conditions of our laboratories and classrooms. I am constantly met by friends who congratulate me on that condition, and they tell me how pleased I must be to be free from all financial worries. So I am reminded of a discussion that I had a few years ago when the Constitutional Convention was in session, with a member of that distinguished body, while we were talking of the Anti-Aid Amendment, since incorporated into the constitution. I pointed out that the amendment, whatever its merits, would have at least one serious defect. It would check, as I saw things, the progress of higher technical education in this commonwealth, and I reminded this gentleman of the facts to which His Excellency has directed your attention tonight. I told him that the welfare of the State demands the maintenance of the very highest standards of education of this type, for unless Massachusetts excels in men it must inevitably go down, handicapped as it is by natural disadvantages as compared with many other states. This gentleman said, "Why, I recognize all that, but why worry? I see nothing to disturb me. The Legislature doubtless, in its wisdom, will later provide adequate scholarships to pay the fees of the men who will go to the higher technical institutions in the commonwealth. So you will have all the students you need and all you want, and the commonwealth will have all the trained men it needs." How fine and how simple, yet how discouraging that well-meaning men charged with grave responsibility should so completely fail to understand the real, vital importance of the problem. He doubtless knew, if he had only reflected, that there are very few institutions of high grade—and certainly Technology is not one of them and cannot be one of them—that meet their expenses through the fees that are charged.

The facts are: The type of education upon which we are embarked has to be of the highest, so it necessarily costs more than any other type of education. You cannot produce a high quality of product on low costs, or the low costs that would be represented by any fees that are possible, unless you make your institution something for the very few who have the means to pay the whole cost. As you know, at Technology the fees are $250 per annum. It costs for two thousand students about a million and a half dollars, being an average of about $750 per student. Now, this doesn't mean, of course, that every individual student costs $500 more than his fees; or, at least it doesn't mean that if one student goes away you save $500 or if a new student comes in you lose it. Unfortunately things do not work out in that way, and the reason is too obvious to mention to men of your intelligence. The fact is, there is necessarily a large difference between the cost of education and the fees that you can possibly receive.

Now, what would be a really satisfactory financial condition for such an institution as ours? I think it would be, say, if this state of affairs prevailed: If you had enough endowment money given you to pay for your buildings, equipment for those buildings and to maintain those buildings and equipment and take care of the overhead administrative expenses, and the fees simply large enough to cover the actual cost of instruction. That, I think, would be a satisfactory condition because it would enable you to settle the size of your institution with reference to the real needs of the Commonwealth, or the nation, and not with reference to the actual accidental circumstances such as those which would otherwise determine what you would do.

The condition which I have described was happily the condition of Technology before the war, but the war has changed all that, upset all calculations that were then made, and upset them for reasons that are easy to understand. In the first place, it has enormously increased the cost of maintaining these buildings owing to the increased cost of labor and materials. In the second place, it must raise in the future the cost of instruction, for you simply must meet the rising cost of living by some reasonable increase in salaries or suffer by what you fail to do. So, it has come about that through war conditions we are faced with the really difficult financial problem. Those difficulties would have been slightly diminished if the plans that we had in mind some years ago could have been carried through. You will remember that only five years ago we celebrated with much acclaim the marriage between Harvard and Technology, and now we seem to be drifting towards divorce. That marriage was designed with only one aim—to exercise the utmost economy in the community in the use of funds that were available for this great end. It had no other purpose. I say, it seems to be drifting into failure and if there is any good left of the experience that we have had in these five years, it is something like this: We have actually proved, and it is no longer possible to doubt it, that Harvard and Technology professors could live together in peace and harmony. Curiously enough, they found by that simple process of living together those differences of ideas about which so much nonsense has been written or spoken. Unhappily, the experiment didn't last long enough to bring home to many people who were interested in it some of the very fundamental facts in the relations; it didn't last long enough to bring home to many the significance of the simple arithmetical statement that Harvard paid $100,000 per annum for its expenses where Technology spent about $1,500,000 per annum. However, it is useless to discuss such matters now I have no such intention.

We have to take the world as we find it and face the facts as they are. The fundamental fact today is, if we are to expand, if we are to meet the needs of the nation and the commonwealth, as they seem to be expressed by the popularity of our system of education, then we need more money. I needn't tell you, because you know it, that these are very poor times for getting money; yet we are going to try to get it, and if we do not succeed to the utmost extent of our hopes or expectations, it is possible that we may have to resort to the expedient of adding somewhat to the fees. That is at least something that we must consider, and I have already said that it would be a reasonable policy to pursue to raise the fees to such a price as to make them pay for the actual cost of instruction, everything else—and the everything else is a large figure—being provided from endowment. If we raise the fees, I hope something will be done by way of additional scholarship endowment to take care of that large body of deserving men, able men who cannot afford higher fees and whom it is highly desirable in the interest of the commonwealth and the nation that we should have within our midst. If we fail to secure all that we need, then there is only one thing for us to do—we must limit our numbers. It must always be borne in mind that unless we have adequate endowment or adequate fees, we cannot possibly grow in numbers without lowering the standards of our education, and we must never do that.

Now, I have presumed sufficiently upon your patience, but I would just like to add a word more with reference to the problem of limitation of numbers, for that, too, is a problem not without difficulties. It is easy to say "limit your numbers to two thousand or any other number," but to do it wisely is no easy task. One of the difficulties arises from the fact that no scheme which has yet been devised for settling entrance requirements is satisfactory, in the judgment of those who have had experience, for selecting the best men. The mere screwing up of the entrance requirements so many points doesn't do the trick at all. Also, the entrance requirements ought to be determined not by some ideal theory as to what they should be, but by what the preparatory schools actually do and can do. If you raise your standards beyond that level you limit the school to just the very few who can afford special preparation for entrance. The hope of Technology in the future, as in the past, is to be able to attract men from all classes and all places so that it may be a real "university" in the original meaning of that much abused term. I wonder if you realize what a "university" is in its historical sense. It does not mean, as is popularly supposed, a place where men study all things; that is not the idea of a university, or not the original idea. The original idea of the university was that it was a place to which men came from all parts to study. The fundamental idea was that it was a university of nations, to which men came not from a single locality but from many. If that is a test of a university, then there is no place in this country entitled to be called a "university" more than the Massachusetts Institute of Technology. As you know, the men at Technology come from all states of the Union and scores of foreign countries. There is, in fact, more than twice as large a proportion of foreign students in Tech now than any of the great universities of the land. These are significant facts which you will do well to bear in mind when you are thinking of policies for the future.

As I said, I must not presume longer on your patience, and I owe you some apology for presenting these figures and facts which are apparently dull. But I have presented them in a hope that there will be an illumination in your minds of their apparent dullness by the deep things for which they stand; and that, after all, you will agree with me that the hope of America lies primarily in maintaining the highest form of education to be found anywhere in the world. War has ended one era, the end of the war has opened up a new era, and in this new era as individuals and as a nation we are called upon to play a great part, and knowing that we can do nothing too good for the training of the young men and women who must bear the heat and burden of the coming day, Technology will never be content with anything but the very best in the field that she has made her own. As in the dark days of old she rallied to her cause innumerable friends, so in these present days of power and prosperity she can do nothing less than go forward from strength to strength.

PRESIDENT MORSS: In planning the speakers for the evening, it occurred to me to choose as a subject one of modern scope which would be of interest to you. When I once chose the labor question, it was easy to find the man, as I knew of some one who could speak with knowledge and authority on the labor problem. He is a Harvard man—an attorney who has had a great deal to do with labor problems and labor litigations. He has always been on the side of law and order. He has had broad experience. He has had more; he has had experiences some of which have been very exciting. I remember hearing him relate one incident, when he was about to go to a certain town to do work, under order of the court, he was warned that if he went to that town he could never get out alive. He went there; he did the work; he is here tonight. I take great pleasure in introducing Mr. Walter Gordon Merritt, of New York.

MR. MERRITT: Mr. Toastmaster, President Maclaurin, ladies and gentlemen: It has been a fine evening and a varied entertainment. We enjoyed the ostrich, bucking broncho and the bulldog; we got the greatest pleasure from your Governor, from your devoted toastmaster, and from the beguiling Dr. Maclaurin. (Beguiling.)

Your toastmaster has asked me to speak on the labor problem—a very easy task! It is like religion, you can say anything you want to upon the subject and no one can prove you are wrong.

As we look over the field of social and industrial facts with the conflicting ideas battling for supremacy, with ardent leaders ready to die for their convictions, we are all brought to the one ejaculation: "Where do we go from here, boys?" There is a backing up in the established industrial order; there is an unsettling of the settled ideas; there are few plans but what meet with challenge from large groups of people. Any one who attempts to speak for employers' associations realizes that if he attempts to speak on the one side he meets with criticism from one wing, and if he attempts to speak on the other side, he meets with criticism from the other wing. On the subject of criticism of unionism you are "damned if you do and damned if you don't." There is no uniformity of ideas on this subject any more. There is a breaking up of the stronghold of conservatism. That, I think, is perhaps the most obvious fact and one of the most underlying facts in the industrial situation.

I sometimes think that all great human conflicts come from barriers to human understanding, and that if we can remove those barriers, ideas, like water, will seek a common level. For that reason I am in accord with the popular note of today which places in the first rank of all solutions of the labor problem co-operation and conciliation. Will the employers and employees continue to operate the industrial machine without applying this industrial lubricant, or do they prefer to wait until the heat of friction chokes the bearings? We must have diplomats in the factories handling the individual employees and eliminating those petty ideas, petty tyrannies and jealousies, which not only jeopardize the morale of the individual factory, but jeopardize the peace of the nation as well. We must resort to co-operation in every sense of the word, for without it men will not work together in furtherance of common aims or in the adjustment of rival claims. Without it you cannot expect to avoid opposition to efficiency, opposition to improved machinery, intolerance of the rights of employers and property, and intolerance of the institutions of the nation.

Now, that isn't my subject tonight. I have a whole speech prepared on that subject, but I am not going to deliver it. My subject is: "Industrial Warfare and Public Policy," or, "The Strike and Public Policy."

In the pursuit of the program of industrial conciliation and co-operation, right must not be compromised with wrong; there must not be sacrificed the sound principles of government and justice. If I were to criticize the policy of the administration during the last three years, it would be that the splendid liberality toward labor has not been accompanied with the firmness for right; that such fundamental principles as responsibility before the law, or the right of a man to work for whom he pleases, when and where he pleases, or his right to join or not to join a union, have not received the support which they deserved; that such undoubted wrongs as objection to arbitration and defiance of the courts have not received the condemnation which they deserved.

Now, the strike, at the most, is an unpleasant necessity. No one has ever yet invented an expedient which seems to adequately care for the rights of the social life of the workmen. Its virtue depends upon coercion and injury, and its justification is a social necessity. But in no other way does municipal law in civilized countries recognize any instrument which is so barbarous; so injury and coercion are calculated to stir up rancor, hatred and antagonism. The reason for the strike is one which is unanimously agreed upon by all people—the concentration of power in the hands of one great company places it so that the individual worker is not upon a fair basis for bargaining, and standing by his own rights does not receive fair consideration; so society, as a matter of social expediency, has said that men must bargain collectively and have the right to quit work in a concern if their position is to be properly maintained, if anything like an approximation to industrial democracy is to be obtained. But there is an old adage in the law, that where reason ceases the rule ceases; so it is my conception that the strike, or industrial warfare, should never be tolerated except where it is necessary to pit economic force against economic force in order to eradicate industrial injustice. The object of society should be to eliminate premature, unnecessary and unjust strikes without impairing at the same time the usefulness of a strike as an instrument of last resort to protect the rights of the workers in private industries.

The strike is an implement of public service, and through its use labor has been able to direct attention to the needs and problems of the workers. There is many an employer who has never known a strike, but who is continually influenced by the fear of it. The time has come when you must distinguish and society must declare where its proper function ends and where its usefulness becomes anti-social and intolerable. To say that a strike may be organized, maintained and fomented for all purposes is ludicrous. Since when has uncurbed human power halted at the portals of justice?

Now to deal with this subject. I want to distinguish between strikes against the government, strikes on public utilities, and strikes in a private industry. As to the first: Above all things, the American people should never tolerate political strikes, or strikes against the government. We are a free government, and a resort to force against this government must not be permitted. The increasing frequency of such insurgent movements in Great Britain and the United States in the last few years and the laxity of a steady public condemnation of them present here an issue of national necessity. Faced with strikes against the government our legislators did not condemn them as they should, for they dared not do otherwise. But bad habits were thus formed, and the return to peace must be marked by a firmer attitude or strikes against the government will become a weapon far more powerful than parliament or the ballot. In January the trades unions threatened to throw London into darkness unless the government would intervene in the Glasgow strike and establish a forty-hour week. Mr. Thomas, the head of the labor unions, declared: "We can now say to our unions, 'You are in a position to say to the state—unless you do what we want we will paralyze commerce.'" He referred to the sovereign powers of the workers. Gentlemen, the sovereign powers of the people of this country are at the polls! There is now threatening in Great Britain a strike of the miners, although Lloyd George has declared that it means not a war with the mine owners, but a war with the state. The transportation companies have declared that if the government interferes they will strike to prevent the movement of troops. The Seamen's Union has twice taken the administration of foreign affairs into its hands. It struck to prevent the transportation of government delegates to the Stockholm Conference; and now it declares that, regardless of what may be done at the Paris Peace Conference, it will never permit the transportation of German made goods. These and similar activities have forced Mr. Andrew Bonar Law to declare that against such strikes the communities must be protected to the utmost.

In this country the drift is in the same direction. In the fall of 1916 the railway unions, supported by the American Federation of Labor, refused arbitration by government agency, declaring that they preferred to trust their interests to their economic might, and prepared to enforce it. There is where the government should have taken its stand, but the question drifted on until in the spring of 1917 when the country was in great peril these same railroad unions threatened to strike because they were dissatisfied with the situation and the decision of the Federal Courts, which upheld the Adamson act. Again they won, and shortly afterwards the Supreme

Court rendered its decision. Gentlemen, I trace this present extent of anti-social strikes in this country to that event. There was an enormous blunder made then. There is a time to yield and a time to stand, and then was the time to stand! And I say to you, if in that fateful fall of 1916 this country had stood firm to the principle that there will be no organized and industrial warfare when government intervention and arbitration are available, then the industrial history of the country during the last two years would have been different. The prospects for industrial peace for the present and for the future would have been brighter. Mr. Garretson, speaking for the railroad brotherhoods before Congress, asked that the railroads be owned by the government and operated by the brotherhoods, but reserving at the same time the right to strike in the event the government conduct did not measure up to the standards of class dictation. Isn't it time for society to disillusion some of these men and to give some kindergarten instructions as to the difference between democracy and Bolshevism?

I wish to point to the fundamental distinctions of a rule by the classes and a rule by the people. There is no room for resort to force in this government. There is no room for resort to industrial warfare when peaceful, disinterested agencies are available for the aggrieved party for adjustment. The time is coming when every labor union has got to be put to the test, " Are you, or are you not, with the government?" The words of President Wilson to President Hutchinson, of the Carpenters' Union: " Will you upset, or will you co-operate? " The world will never be safe for democracy until government by strikes shall perish from the earth! And if this struggle goes on with a class attempting to lay profane hands on the altar of government to make it a tool for class purposes, then democracy will fail and we will have a dictatorship of the proletariat, or a dictatorship of vested interest. In the long run it would be a dictatorship of the vested interest, and the workers would lose.

Now, speaking for a moment on the subject of strikes on public utilities: You know why they are called public utilities? It is because the habits, activities and comforts of our own lives are so essentially dependent upon them. The law has long since realized that the state has a right to step in and say to the public utilities at what price they shall transport passengers and merchandise. Isn't it time that we extended that same principle to the regulation of labor? Are not wages a component part of this rate? Aren't regulated rates and unregulated wages a contradiction in terms? Can you protect society against extortionate charges on one hand unless you protect them on the other. We must substitute compulsory arbitration in the form of commission regulation to protect the rights of the workers against selfish employers of the public utilities and abolish in that connection the right to strike. I tell you, gentlemen, if it had not been for the decision of the United States Supreme Court some twenty-five years ago in the famous Debbs Case, which declared the combinations to prevent the transportation of scab Pullman cars illegal, we would have been confronted with combinations today to dictate what articles could be transported from the dealer to the consumer. We took a firm stand on it at that time and there has been little revival since. If we take a similar stand on the question at issue, that the commerce of the nation shall not be paralyzed by such disputes, public opinion will rally to the support and you will put it through.

Now, when we come to the question of private industry, where self-reliant and ambitious employers and employees must be given free scope to exercise their own talents, and where the right of organized action on the part of the workers is a necessary part of our economic equilibrium, we must travel more cautiously. The workers, employers and society as a whole are opposed to compulsory arbitration in private industry; and so am I. Is there not a middle course? And this particular thought tonight is my original contribution to the subject, so far as I know.

Can we not make strikes under certain circumstances so unattractive and so hopeless, and arbitration and observance of agreements so alluring, as to finally break up this strike habit and lead people to accept the more orderly method of adjustment? My clear thought on this subject is, that no strike should be allowed to take place until, first, all methods of conciliation have been tried out; and, secondly, no strike should take place in violation of reasonable agreements. Look at these three propositions separately. A strike in advance of conciliation is wanton, because conciliation may prove it unnecessary. This is in accordance with the professions of all the interests which declared that a strike is a weapon of the last resort. Next, strikes must never be declared against the person who is willing to arbitrate. He who is afforded access to the tribunal of reason must never resort to the tribunal of force. Every employer should be faced with the alternative: " Will you arbitrate, or shall we strike? " and if he is willing to arbitrate, that should be a guarantee, so far as the power of the state is able to make it a guarantee, against the conduct of industrial warfare against him. That isn't compulsory arbitration. He doesn't have to arbitrate if he doesn't want to. He can go back to the old method of industrial warfare; but no strikes or industrial lockouts should be declared as a method of industrial warfare when the party against whom demands are pending is willing to put the matter up to a disinterested tribunal. Industrial warfare must never be conducted as a means to further industrial injustice; and industrial injustice is measured by the willingness to submit to arbitration, and must always be the price of industrial peace. That has many advantages. Parties don't want to arbitrate and draw in a third party all the while, but when they see that they must arbitrate or else engage in industrial warfare, they find themselves much more ready to conciliate. Here our program squares with the program of the League of Nations, which seeks to promote the observance of agreements. This program is in accord with the spirit of the times. It squares with the standards set forth in the League of Nations which seeks to substitute conciliation, arbitration and adherence to agreements in place of clash of rival forces. You know that program as well as I. It provides that none of the subscribers shall declare war until first there has been arbitration or inquiry by the Executive Council, and even then they will not declare war until three months after the arbitration, or the recommendations of the Executive Council; and lastly, to never declare war against those who comply with the arbitration and recommendations of the Executive Council.

Now, there may be obstacles in the way of establishing an international force without conflicting with the constitution; there may be difficulties in getting a supernational force to carry out this great plan. As to those things, I have nothing to say, but if those principles are right, and if there is the difficulty of setting up an omnipotent force which is powerful enough to force its will upon nations, then surely such principles are applicable within the nations themselves where society is capable of forcing its will upon every section of society. There is just as much need for the application of those principles within the nation, for I believe that the dangers of clashes between classes are as great as the dangers of clashes between nations. Of what avail is it to set up an institution of that kind as between nations with the application of great human principles of that character if we are not prepared to apply them within our own house? We hope sometime that we may be able to get legal regulations in furtherance of such principles, but we are now trying to put that program into effect by writing the principles in definite agreements between capital and labor so that they will become established and control the conflicts between these two great bodies. I believe it is the duty of an employer who is extending the principle of profit-sharing among his employees to insist upon it as he holds out these additional funds, on the one hand, that society shall be protected by the insertion of reasonable principles of adjustment, on the other hand.

Now, we all hope that there is to be a return from the rule of force to the rule of reason—that might will bow its head to right. We know that soon our minds will be concentrated more on the issues between classes than upon the issues between nations. Our prophecy has not come true, as we had hoped, that this great war would lead to bridge the chasm between classes, but we now know only too well that the class conflict has shown itself durable enough and powerful enough to survive this great world war—this great world cataclysm—the war which opened as an earthquake many institutions and has left the foundations of this conflict unshaken and has left us heir to responsibilities that are appalling. Let us not delude ourselves with the thought that things are well enough. Let us trample under foot the temptations of complacency. Let us bend our energy to the creation of forces for promoting international union, for the creation of agencies which will guide the ship of state through the danger zone.

These are my convictions which lead me to reach out here and elsewhere for new plans and new aims, and for him who thinks that things can go on in the old groove I have no message. Will we have the political genius and courage to distinguish between the strike as an industrial warfare and the strike as a means of economic adjustment, having fought a world war against rule by force, and having committed ourselves before the world as against this rule of might? Will we have the faith to apply those ideals at home? If, at the outset, this country had been faced with a strike solely as an insurgent movement against government intervention, the issue would have been seen clearly and we would have dealt with it as such. Unfortunately, the strike, and almost unnoticed, has risen as an insurgent movement, has become confused with the strike as an economic movement, and almost unnoticed, has ridden with it into the market place of public conception. We will have none of the English policy which exempts labor unions from law; we will have none of the French syndicalism with its revolutionary aims, nor will we have any of the Swedish policy where the employers recognize the right of their men to carry on a political strike. American people must have a policy of their own. America, the land of the open door and the open shop; America, the birthplace of liberty, must adopt a truly American policy untinctured by hatred of sovereignty, filled with the hope and ideals of the new world and with a full comprehension of the fact that democracy is a " Government of the people, for the people and by the people," and which means above all things a government to which all people owe allegiance of loyalty and obedience.

Mr. Van Rensselaer Lansingh, '98, had also been scheduled on the program to speak, but as the hour was very late when Mr. Merritt finished his stirring address which was heard with much enthusiasm, and as most of the diners had already heard or read Mr. Lansingh's story of the Paris Bureau, he very gracefully offered to forego his rights. The dinner, therefore, broke up, having been, in the estimation of all who attended, an unusually stimulating and notable evening for the future of Technology.

THE MEMORIAL HOUSEWARMING

At last the undergraduates are at home — a great festivity celebrates their taking possession

In the summer of 1916 the alumni of the Institute held a glorious jubilee. They came from the far corners of the world to see that the new buildings which were to house their alma mater were properly dedicated, and they went away satisfied. Those new and perfectly equipped buildings had received their baptism in a manner befitting them: rockets had blazed and roared, searchlights had flared brightly across a benignant sky; the Masque of Science had been danced gloriously under radiant lights; the "Bucentaur" had successfully navigated its perilous trip across the Charles; the proper orators had spoken the proper words in the proper places; and the cornerstone of the Walker Memorial had been laid.

Then the alumni went away and in the fall the students came, proud of their new home, a little in awe of it, and not a little depressed. There was no place they could call their own. The activities rigged up little cages, that looked suspiciously like chicken coops, in the basement of Building 1, and talked hopefully of the time when the Walker Memorial would be completed. Faculty and students alike patronized the "Caf" in the basement of Building 2, and talked hopefully of the time when the Walker Memorial would be completed. Every one was watching the great pile of stone and cement take shape and in it finding consolation for innumerable discomforts because some day the Walker Memorial would be completed.

And in the course of time it was, but before the many student dreams could be realized America decided to cast its lot with that of the Allies in cleansing France of its scourge and in saving the world from the Hun. That changed everything. Instead of the Walker Memorial resounding with the crack of a ball against tenpins, the jazz of a dance orchestra, the shouts of a healthy crowd over a wrestling match, it rang with the clear call of the bugle, the sharp words of command, the dull thud of rifle butts. The new building which had been dedicated to rest and play was filled with hurrying, bustling lads in olive-green uniforms, now in silent line at attention, now in mess formation, now at fatigue, perhaps swabbing the "main deck," or rushing down the "larboard gangplank." The Walker Memorial had become a "training ship" for naval aviators; the Institute activities moved to the little Stone & Webster construction building, and the students as a whole continued to wander aimlessly down the corridors with no place of their own at all.

But even world wars come to an end, and in January of this year the last student aviator packed his little locker trunk, clutched his discharge in one hand and his transportation in the other, and departed for the old home town, leaving the Walker Memorial silent, empty, and alone, a big, healthy child two years old that had lived a phenomenally active life with a strange and unloving family, which had suddenly left it to those who would understand and cherish.

The whole Institute breathed a sigh of relief and thanksgiving. At last one could eat a meal at the Walker Memorial without feeling like an unwelcome intruder; at last a student could play a pleasant game of pool or bowl a private tournament; at last there would be a place to spend an idle hour smoking, talking, or reading; at last the activities would have a real home. The dream of years was at last realized:

the Walker Memorial was built and was being used for the purpose for which it was intended.

Such an occasion demanded celebration, a celebration befitting the building and all that it stood for. The Institute Committee decided upon a smoker, but not an ordinary smoker—oh, by no means—but a smoker such as was never known before; one, in fact, which combined all the joys of a banquet, the movies, vaudeville, a general hurrahing celebration, and at the same time possessing the dignity befitting a genuine state occasion. Such was the plan, and the greatest compliment that can be paid the committee is to say, and truthfully, that they brought their plan to complete realization.

That smoker was the real dedication of the new Institute. The great reunion in 1916 was the formal occasion that let the world know that the Massachusetts Institute of Technology had moved to its new home; but as far as putting the thing in the new buildings, which would make of them a university, it counted not at all. Any one with sufficient money can build buildings, equip them, and pay professors to hold classes in them, but it is only when the students begin to live in those buildings that they are more than buildings, and since 1916 the students of the Institute have not lived in the true sense of the word in the new buildings. They merely came to them, received certain instruction for which they paid, and departed for more congenial haunts.

True, the activities continued up to the dark days of the S. A. T. C., and the "Tech" survived even those; but after all, the life of the various activities depended upon the courage of a few brave souls who were willing for the sake of the future to give their time to them even in the face of continued and often violent opposition and criticism. It was felt by many people that war time demanded a grave and studious mien; that boys should not dress in fluffy skirts and kick unscientific heels behind the footlights; that the time given to athletics could be better spent in the laboratory or on the drill field, that the sudden birth of the Woop Garoo was a demonstration of a hussy spirit that had better be crushed and soon. However, the activities struggled on, and while they managed to exist, they did not reach the student body as a whole. To all intents and purposes, the Institute was for three years a real " educational factory," and it was not until the night of Friday, January 31, when the big smoker was held, that the old spirit, born and reared in the Rogers Building, was awakened and really transferred over to the new Institute.

And now for the smoker itself. No one person can describe it, for no one person could possibly see it all. A three-ring circus is at least all before one's eyes, but the entertainment at the smoker was scattered over three floors, and no matter where a man went and how much he was enjoying himself at a particular time, he had the uncomfortable feeling that he was missing something worth while some place else. Let's start at the top and work down.

The gymnasium, which is on the top floor, but none the less a gym, furnished the proper setting for a number of wrestling and boxing matches, as well as for some less primordial entertainment by the musical clubs. Representatives of the various activities held open house in their offices which are also on the top floor. Hardly any of these offices are really large enough, but they are permanent and they are so much better than anything known at the old Union that only praise need be given them. However, one is inclined to ask, " Why the squash courts? " There are four of them —count 'em, four—and they occupy much valuable space which might well have been used. To the average student " squash " means a yellow vegetable—or is it a fruit?—that grows on a vine and makes into better pie than pumpkins do. We venture to prophesy that those courts will never justify their existence, and because they do exist and take up needed space, such organizations as the Walker Club must continue homeless. It is quite useless to think of changing them into offices or club rooms because, like the main library, they are lacking in two more or less essential accessories, light and heat.

We shall skip the second floor because at the time of the smoker the lounging rooms had not yet recovered from their treatment at the hands of the naval aviators and were being cleansed and repainted. The same condition existed in the lounging rooms on the first floor.

In the main dining room the smoker proper took place. To begin with, every one was fed. That is not remarkable. That they were fed well is not remarkable, but that they were fed free is, and we venture to say that more than one curious undergraduate came to the smoker to see just what sort of a meal one could get for nothing in these days when an egg is a luxury and a ham sandwich a dissipation. During the dinner, and we repeat that it was a very good one, the eating became a secondary consideration. There were movies to look at, movies much too funny to be shown while one is drinking coffee; speeches from the leading members of the various activities to listen to; almost constant music from a very little observed orchestra; and then another movie or perhaps a burst of song when the orchestra swung some popular melody above the cheerful banging of the trays. It was a very gay party, gray haired, but not over-dignified professors rubbing chummy elbows with bright-eyed, flushed-cheeked undergraduates, who shouted to each other that this was the life and, thank God, the war was over; young instructors almost forgetting the weight of their years and grinning in joyful appreciation, perhaps in a thoughtless moment even singing a bit; an occasional co-ed flashing by with a gay smile for the assembled masculinity, her light giggle rippling high and clear over the bass roar beneath; oh, it was a " big night " all right and there was no thought of taps to spoil the fun.

Dr. Maclaurin was the first formal speaker and he proved his mettle by being joyously informal. It was a real smoker talk, humorous, friendly, sincere. It brought their president very close to the students, and it was hard for many to believe that the smiling, jolly man before them was actually " Prexie " of whom they had an honest traditional fear because he was " Prexie." That night Dr. Maclaurin became an actuality to most of the students, and they liked his smile, his quick movements back and forth, and his sincere admiration for activities.

Dean Burton was just Dean Burton, and that is all the students ask. In his friendly, straightforward fashion he told them of the Institute traditions, the things that had been done in the past, things he hoped would be done in the future. Most of all, he impressed upon his audience the need for student government for students, which demanded above all things self-control.

We are sorry that we can say nothing about Mr. Henry A. Morss, '93, and his speech, because through some error he was not called on until after the regular program was completed, and the din of students scrambling after " sinkers " and cider was so great that we could not hear a word he said. According to the news story in the "Tech," which was written and printed before the smoker took place, " he related the history of the Walker Memorial from the time that alumni of the Institute were called upon for funds for the construction of the edifice and so enthusiastically responded, through the period when the building after completion was turned over to the government and quartered the Naval Aviation Detachment, to the present time when the building is to be used for its original purpose, etc." We have a feeling that the "Tech" correspondent was more interested in composing a smothering sentence than in telling what Mr. Morss was going to say the next day, because whereas we could not hear Mr. Morss we could hear the continuous laughter of those that did and we doubt very much if he gave a dry biography of the Walker Memorial.

There was entertainment a-plenty. The Glee Club sang twice, once in key and once out of it, which gave a pleasing variety. The Banjo Club jazzed their jazziest; John Philbrick did a black-face stunt; Laurence Conant "did" Harry Lauder; Walter Frazier sang once more his perennially funny vampire song from "Not a Chance"; C. L. Eksergian played the 'cello;—but why go on? The tale is endless. We couldn't possibly describe it all, the color of the class banners, the shouts and the laughter and the singing, the pleasant acrid smell of the blue smoke wreathing slowly to the ceiling, the stunts, the speeches.

Besides, it wasn't only the things that we have described and failed to describe that made it a "big night"; it was something far deeper. It was the silent realization that the war at last was over, that lives were to be lived again and that in the living of the lives of those at the Institute the Walker Memorial was at last to play its part; that activities were no longer wandering tribes in strange lands; that the Institute at last belonged to the students themselves; that somehow it was no longer just a mere educational factory. After three years of waiting the real dedication of the new buildings took place, and when at last "The Stein Song" was sung, every one went home very happy and a little sad because all unknown out of the spirit of the evening a new Institute had been born, very proud as it looked at the past, very brave as it faced the future.

Percy Marks,
Department of English.

TECHNOLOGY HAS NEVER HAD A RHODES SCHOLAR

Now is the time to get one—no qualifying exams.

Details of the plan for the resumption of the election of Rhodes scholars in the United States are announced by Prof. Frank Aydelotte of the Massachusetts Institute of Technology, American secretary of the Rhodes trustees. Qualifying examinations no longer will be required.

A statement authorized by the trustees in London reads:

> The election of Rhodes scholars throughout the United States will be resumed during the present year. The postponed scholarships due to the various States for 1918 and 1919 will be filled next autumn. Scholars elected for 1918 will come into residence as far as possible in January, 1920, and will enter respectively in January and October, 1921.
>
> It has been decided that the qualifying examination hitherto required of all candidates shall no longer be held, and scholars will be elected on the basis of their collegiate or university record, supplemented if necessary by any further tests that the committee of selection may in their discretion impose. Other conditions of elegibility will remain as before.
>
> There will be elections in all States.

Write to Professor Aydelotte and find out about it!

THE MEMORIAL — A RESUME

By John Ritchie, Jr.

Technology's long-desired social center became a fact this January when the Walker Memorial was dedicated. This building bears the name of the second president of the Institute, Francis Amasa Walker, "soldier, educator, economist," one of whose wishes during his later life was to provide for the social needs of the student body.

While General Walker was president of Technology, there were problems of very serious nature along financial lines, and to his regret he was obliged to spend his time with them and at his death the question of the social side of the Institute was yet unsettled. His wish was known to others, however, and shortly after his going a movement was set on foot towards a fulfillment of his ideas. Funds were collected and by 1901, four years after his death, there was available the sum of more than $100,000 for the purpose. The energetic alumni committeemen had actually in hand at that time the plans of a building to be erected near the Boylston street structures, on the site that afterwards was utilized for the engineering departments.

Something, no one now knows just what it was, delayed the execution of this plan, and shortly afterwards the Institute erected at this place the engineering buildings which have but recently been removed. Meanwhile the spirit that called for the erection of the Walker Memorial continued active, and other funds were secured. When it was definitely decided that the Institute would move to Cambridge, plannings for the structure were made, one committee placing it at the corner of Massachusetts Avenue and Riverway.

The fund grew larger, until four or five hundred thousand dollars were finally available. Building was delayed, however, until the educational plant should be completed.

While the construction of the educational plant was under way, plans were matured for the building of the Walker Memorial, and the laying of its corner stone was one of the features of dedication week with its ceremonies, reunions, pageant and display. It was ready for occupancy by Labor Day a year later, the Institute meanwhile conducting its restaurant in one of the spacious basements of the building devoted to general studies, and affording what it could of rest and recreation rooms of temporary character.

Meanwhile war had been declared. For a portion of its share Technology undertook the special education in mechanics and other branches of great government schools, which at their maximum numbered a couple of thousand soldiers and sailors, and in addition, as a convenience to the authorities, furnished board and lodging. At the critical moment when the demands of the regular students were made for the drafting rooms which had been during the summer the dormitories of naval aviators, the Walker Memorial was finished. It would help solve an important difficulty, so alumni and students, with the Memorial really theirs, the dream of a decade come true, deemed it a patriotic duty to turn it over to the uses of the naval aviators. These have just gone, so that it is with enthusiasm that Tech men enter into the possession of their social center.

The Walker Memorial was erected by the Institute at a cost of about $600,000. He who enters through the portico finds himself in a spacious lobby with rooms on either hand and the doors of the great dining hall before him. The rooms at the side will be used for general club purposes, one of them being the library and reading room. They are so arranged that with the foyer they will constitute a great reception hall. The dining room occupies the entire center of the building. It is flanked by terraces upon which meals may be served a la summer garden, while at the back is the cafeteria employed in the daily furnishing of meals to students. This has been an important work during the occupancy of the building by the Naval Aviation Detachment, for Mrs. Scripture, the manager, has a record of nearly a million and a half meals since the building has been the home of the aviators.

The great hall is furnished with balconies for spectators at the social events, it has a fireproof movie booth, with projecting lanterns and cinematoscope, while the screen, usually ensconced in the capping of the pillared mantelpiece, moves automatically down when desired. The room is severely plain, its decorations being in cool gray picked out with cardinal, the Institute colors. On the second floor are other rooms in the front of the building for social purposes, the long galleries to the main hall, and to the west the administration offices, a long dining hall and a cosy grill. A vast gymnasium occupies the space above the hall, while the offices of various activities find their homes in convenient rooms along the river front. Here, are the offices of the musical clubs, of the Tech Show, of "Technique," the "Voodoo" and the "Tech," the latter having a spacious city room and editorial quarters in the basement. The basement, which is mostly above ground, contains shower baths, storage, an excellent four-track bowling alley and a good indoor rifle range.

AS IT WAS IN THE BEGINNING

Old days of the rush recalled by present Freshman Class

MEMBERS of the sophomore and junior classes, to the number of fifteen hundred at the Massachusetts Institute of Technology fought for several hours on Saturday morning, January 25, despite the efforts of Dean Burton and three Cambridge policemen to quell the disturbance, the freshmen finally winning.

The battle was over the flying of freshmen class flags from the tall poles on Lowell and Du Pont Courts, which the sophomores saw aloft when they arrived yesterday. In revenge they tied Sidney Biddell of Boston, president of the freshman class, to the pole on Du Pont Court because he refused to climb it and take down the flag there. An enterprising sophomore climbed the pole and threw the flag to the ground, where it was torn to ribbons. About twenty-five freshmen were run down and trussed with cords.

About ten o'clock a big group of freshmen appeared and gave battle. They fought hard but were subdued and a sophomore class flag was run up. Then Dean Burton appeared and tried to restore order, but the defeated freshmen came back with heavy reinforcements and renewed the battle. Clothing was torn and many bloody noses and black eyes appeared as if by magic. Three policemen appeared but they could not stop the rioting.

Finally the freshmen drove off the sophomores and Jack Heffernan of Seattle climbed the pole, tore down the '21 flag and hoisted anew the colors of '22.

THE JANUARY COUNCIL MEETING

The sixty-seventh meeting of the Alumni Council held as usual at the Engineers' Club, on January 27, was notable partly for a very good attendance and partly because of an unusually live and informative discussion, in which nearly everybody took part, concerning the story told by President Maclaurin, Dr. Dewey and Professor Pearson about the faculty reconstruction committee's work in the direction of fixing more definitely the relation between professional work and the so-called general, or liberal and cultural studies. The consensus of opinion, as given by most of the alumni present, some of them prominent in Institute work, was that what the Institute needed was not a smaller amount of liberal study but a greater.

Another decision of interest was the vote by which the alumni hope to co-operate with the Corporation in the provision of a suitable memorial for the Technology honored dead, a memorial, whether a building or an endowment, which should last forever and supplement the permanent record of the Institute's part in the war which must some day soon be compiled.

Capt. Grosvenor D'W. Marcy, '05, was the salad orator and spoke of work in his branch of the service during the war.

The meeting was called to order at 7.45 by President Morss, with an attendance of forty-three. Among the guests were Dr. R. C. Maclaurin, Prof. W. H. Lawrence, Prof. D. R. Dewey, Prof. H. G. Pearson, Prof. R. E. Rogers, Dean A. E. Burton, Dr. S. J. Mixter, Mr. A. F. Bemis, Mr. F. L. Locke, and Mr. H. S. Ford.

The business on the call for the meeting was: What is the alumni point of view in regard to general studies at the Institute?

The president made announcements and called the attention of the Council to plans for the annual dinner, which will be held on March 1. He announced that A. Blakely Smith of '93 had recently been appointed business manager of the American University Union in Paris and that he takes the position first held by Mr. Lansingh. He also announced the election of fifty-five associate members, of the classes of '18 and '19 chiefly.

The president then spoke of the conference which had been held with representatives of student activities and of the renewal of student activities at the Institute. He spoke of the smoker held in the Walker Memorial, at which sixteen hundred students were present and called the attention of the alumni to the fact that one thousand of them were men who had never been at Tech till this year, so that they were not at that time familiar with the Technology traditions. He told of the informal charter which was presented by the president of the Alumni Association to the students and stated that the Dean requests that such a ceremony be held each year in order to let the students know of the alumni interest in the welfare and maintenance of the Walker Memorial.

After a discussion in which it was noted that there had been some class rivalry at the Institute in which there were conditions not endorsed by the alumni, it was

Voted: That it is the sense of the Council that the Advisory Council on athletics should arrange for a field day to be held this spring.

Dr. Tyler made a report as to the joint meeting of the Executive Committee and Massachusetts Institute of Technology Committee on National Service in regard to continuance of war work and of the work of the Women's Auxiliary in the Rogers Building. It was

VOTED: That the report presented be accepted, indicating that the joint committees believe it well to continue the collection of funds for the maintenance of the Technology Bureau throughout the remainder of the calendar year and that the work of the Women's Auxiliary, so far as the Institute is concerned should, and it is so planned, gradually come to an end sometime in April.

Mr. Lansingh stated that the lease of the Royal Palace Hotel by the American University Union, of which the Technology Bureau is a part, had been extended until October.

The secretary read letters from the editor of the TECHNOLOGY REVIEW in which it was suggested that class secretaries be requested to gather information concerning the activities of members in their own class, forming a foundation for the later reports which should be made of the Technology service in the war.

President Morss next called upon President Maclaurin, who spoke to the Council on the Permanent Records of Technology Men in the War, remarking that their services were very notable and worthy of the cause. President Maclaurin suggested that serious consideration should be given to the plan for a permanent memorial of the mighty dead. He suggested that we should avoid using the energy on things ephemeral, and that the memory of our men should be crystallized in a permanent memorial. He believed that the alumni should consider a worthy memorial to commemorate the priceless contribution of those who fell, one which should be appropriate and not necessarily costly.

Upon motion duly made and seconded, it was

VOTED: That the president appoint a committee to consider the larger problem of a permanent memorial of Technology men in the war.

Upon motion duly made and seconded, it was

VOTED: That the president appoint a committee to take up the matter of preparing a war record of Technology and its alumni.

President Maclaurin next spoke to the Council on the question of reconstruction and stated that the faculty had had this problem in mind even before the war, but that now the war has given it added interest. He stated that faculty members are open minded and are deciding problems on their merit. The discussion centers now upon the proper balance of different types of study. There are, as always, two types of opinions as regards the value of science and literature. There are two ways of looking at the Institute, first as a professional school which extremists suggest should give up all general studies, and second, because of its being a scientific school the non-scientific subjects should be given special prominence. Along this latter line the so-called humanistic subjects, it was suggested, should be emphasized to a greater extent. Dr. Maclaurin suggested that these questions would be settled within the next few weeks. He suggested that the antipathy toward the humanistic subjects should be outgrown and that really the broadness of man's life is the larger problem rather than whether it is scientific or literary. The breadth of life is of vital importance to a real man. He told the Council that he hadn't come to express his views on the problem but to ask the views of the alumni.

Dr. Dewey was then called upon as the head of one of the general departments and he told the Council that he had not come to the Council to preach the expansion or the emphasizing of the particular subjects which he taught. He came to Technology from a college of general studies, but he had been converted to the Technology system and that he often regretted that he had not had the advantages of the Technology training and its discipline. He told the Council how the subjects in Economics had developed during the past twenty years and how, when he came to the Institute, it could be assumed that many students had a general knowledge of commercial processes, but that now it might be assumed that even members of the Council were not familiar with the current practices of some of the banking systems. He also told how previously it might be expected that one of a large class might speak from a socialistic point of view but that now a larger number spoke from that point of view and even from the point of view of Bolshevism. He told how the students desired to have broader training on cost accounting and analysis of accounts, and that they craved a greater knowledge of the handling of men and a knowledge of the labor problem. Continuing his discussion, he told the Council that he felt the need of advice from alumni who are engaged in the practical problems of business.

Following this discussion, the president called upon Professor Pearson, head of the department of English and History, who spoke to the Council on the training of students in general topics, and what the whole English department was trying to accomplish. He said that during the past term there were 1400 students taking English and that the problem of control in itself is complex. A problem of the department is to teach the students to get the most out of the printed page and the returns at present seem rather meager. Work has been helped during the past term by the use of the "History of the Last Fifty Years in Europe" as a topic. By trying to bring out an expression of opinion from the students, the classes have thoroughly waked up. Each member in the class is appointed one topic which he has to write up and speak upon for eight minutes. The department is trying to emphasize to the students the truth of Professor Swain's statement, "What a man can't explain, he doesn't know." Another problem of the department is to do what it can to help the students along in their professional writings, such as the writing of letters, business correspondence and the preparation of reports. They are trying to teach the fundamental principles of making a clear and orderly report. Professor Pearson further described a history course which was planned for the second-year students, in which interesting problems of English History could be discussed to great advantage. For all this work, Professor Pearson emphasized the need of properly organized general studies through three years of the Institute's course.

Following Professor Pearson's discussion, the meeting was thrown open to a general discussion, in which nearly every one contributed something valuable.

Mr. Bemis stated that he thought that something is lacking in an education that makes Technology men too much like machines.

Mr. Hart said that while it is not true that a man cannot build a good bridge because he does not know about romance languages, yet there is a need for such knowledge,and the opportunity to serve and to meet with people is certainly improved by the general knowledge of an engineer.

Mr. Lansingh remarked that his particular problem is to find the proper place for his son who is about to enter college, and that although he wants him to be a business engineer he realizes that much emphasis must be put upon broadening studies, and he is determined to choose some place where about a quarter of his son's time can be put on to general studies.

Mr. Monroe called the Council's attention to the fact that representative Technology men have filled places of great responsibility. Furthermore, the problem of technical training in President Rogers' time was simple, but now on account of the great changes in conditions the problem is more complex. The fundamental problem at this moment is to provide for real men to teach men and that the Institute will have to offer enough to attract them. So swift have been the changes that men of value five years ago would not amount to so much at this time.

Mr. Bowditch believed that there should be greater co-operation with the industries. Professor Richards reviewed his experiences and change of ideas during the past forty years. He spoke of the experiences of non-educated men and suggested that they get their power through induction.

Mr. Hopkins spoke of the work in factory management and that a new time has come where machines are installed to do away with hand labor and that this is emphasized more on account of the present condition of labor. He spoke of his experience in picking Technology men to assist him on his staff and those whom he had chosen seemed to a greater extent to be non-graduates rather than graduates. Mr. Packard, too, spoke of the experience he has had with Technology men as being well prepared to undertake new problems.

Mr. Metcalf spoke of the great need of having Technology men trained to meet men well and to make good report by voice or in writing. It seemed to him that our men have, in general, lacked this training. He suggested that our students should be given a breadth of view and an interest in their subjects and that they should be turned out while they are still young and enthusiastic.

Mr. Everett Morss emphasized the point that men should realize that the training of engineers merely is not training men to do work with their hands, and Professor Spofford suggested that the big problem of the Institute was to turn out a good engineer, and turning out a good man to act behind the engineer, and that the professional department should give inspiration for the general studies.

And the adjournment, at nearly eleven o'clock, found the Council broken up into little knots of men still comparing experiences and arguing about what is, after all, the chief problem that Technology has to face.

A NEW KIND OF TEACHING JOB

The sort of course we need at Technology, too

Erwin H. Schell, '12, assistant professor of Economics at Massachusetts Institute of Technology will, besides his regular work, be one of the faculty of the new School for Social Research recently opened in New York under the auspices of well known liberal and radical economists, historians and sociologists.

Anthropology, psychology, political economy, finance, statistics, jurisprudence, sociology and similar topics will be taught, not to impart " merely cultural information," but to develop a practical application of these subjects in an understanding of the great questions which are arising out of the readjustment period following the war.

The school will not be so radical as the Socialists nor so conservative as the established universities. It will be undogmatic in all its teachings. It will approach no subject with preconceived opinions.

A group of instructors has been selected who recognize the pressing necessity of collecting accurate information about political, social and industrial conditions and who are capable of bringing our ever increasing knowledge of natural science, history, psychology and anthropology to bear on the task of social and economic readjustment.

The school will turn out a new class of leaders. It ought to turn out a new kind of aspirant to political office, who will be clever enough to gain his constitutents' support by fair means and represent their real interests, not those of his party machine.

EDITORIAL

WHAT shall be Technology's Memorial to her undergraduates and graduates who fell, whether in action or in other, no less useful service, in the Great War?

Other colleges and universities are thinking already of suitable buildings or institutions; the Institute will not want to lag behind. We shall have, of course, our records and histories, both class by class and for the school as a whole, as a living organism, but, as President Maclaurin has said, a history is not the most vivid form of memorial. Already the Alumni Council has appointed a committee to co-operate with the Corporation concerning these things; the compilation of Massachusetts Institute of Technology war records is only a question of time, but the form which the permanent Memorial is to take has hardly begun to occupy people's minds.

We are glad to present the question, therefore, to the body of the elder brethren. THE REVIEW would like letters and suggestions.

What form shall Technology's War Memorial take?

We have as yet heard no suggestion from President or Corporation. Perhaps they feel it only fitting that the Alumni first express their opinion. Neither has the undergraduate body, which will surely wish to add its tribute, given thought to the matter. The suggestions at present are two:

One is that the Memorial shall embody the spirit of youth, that as the men who died were young men, it is their youth which should be commemorated. It was planned that some day there shall be a statue in the center of the Great Court, one typifying Technology, like that of John Harvard, or the Alma Mater at Columbia. Why not, says Dean Burton, erect for the spirit of Tech not any academic figure, nor strong, fostering mother, but a replica of the David of Michelangelo, of which none exists in this country, that lean, eager, angry figure standing over the fallen Goliath. That would be the real spirit of Technology in this war.

No, says a prominent alumnus; this war was international in its scope and result. The lesson of the peace will be to bind America irrevocably to the other nations of the world. Her day of isolation is past. Now Technology is an international institution. Hardly a country but is represented here; the number of foreign students grows greater every year. The best memorial to the young men who died in this war would be something to foster the international spirit at the Institute, to make it more important, " that these dead shall not have died in vain."

A continuing institution is a better memorial than any building. Why not a fund for increasing Tech's relation with foreign lands, exchange professorships perhaps, exchange scholarships, fellowships for foreign students of high rank, an increase in dignified publicity of Technology aims and methods abroad, more opportunity for American boys here to study foreign opportunities in their profession. And perhaps, if some concrete memorial seem advisable, a building which shall express these things and which shall house, also, the social life of the foreign students who only too often have to live lonely in an unsympathetic land.

Here are two suggestions. What others are offered? Will the alumni express themselves? Statues? Memorial halls? Educational expansion? Fellowships? A "Soldiers'" field for athletics? Gold-lettered tablets? Portrait collections? Scholarship funds? All these are possible, none is unfitting.

How shall Technology best honor her young dead that do her such honor?

R. E. R.

THE WAR SERVICE AUXILIARY SUMMARY

Distributed to those present at the Alumni Dinner — but good reading for all

Boston, February 21, 1919.

James W. Rollins, Chairman,
M. I. T. Committee for National Service.

My dear Mr. Rollins:

As the Auxiliary derives its authority from the Alumni Council through your committee, this seems a suitable time to summarize the work of the Auxiliary, so that you may place it before the alumni at their annual dinner on March 1.

In the spring of 1917 the Auxiliary was established to co-operate with your committee by rendering every possible assistance to Technology men engaged in the war and to the families which they had left behind. It was at first thought that occasional letters or a bit of advice here or there would meet these needs, but the Institute men entered the war in great numbers, and government schools were established at the Institute, so that there was an unexpected expansion of our work and it soon absorbed all the time of many people.

As the backbone of the work of the Auxiliary, a catalogue of men in service was assembled. Today this catalogue carries 2770 names of Massachusetts Institute of Technology men in service. An analysis of these names yields the following results: Army, 2221 (465 Engineers, 311 Aviation, 247 Ordnance, 244 Coast Artillery, 241 Infantry, 196 Artillery, 100 Chemical Warfare Service, 75 Sanitary Corps, 62 Quartermaster's Corps, 60 Medical Corps, 43 Signal Corps, 35 in other branches of army service); navy, 549 (149 in aviation, 23 in Marine Corps); deaths 101; citations 46; men known to have gone overseas 1097, Ambulance, Red Cross, Young Men's Christian Association (A. E. F.) 74; commissioned officers 1944 or 70 per cent of all men in service; 1558 alumni hold commissions (of these 1079 are graduates of Massachusetts Institute of Technology) 354 undergraduates are commissioned officers.

Of the 1568 men holding commissions in the army there are 469 2d lieutenants, 520 1st lieutenants, 406 captains, 124 majors, 32 lieutenant-colonels, 12 colonels, 3 brigadier-generals, 2 major-generals. Of the 344 men in the navy holding commissions there are 185 ensigns, 53 lieutenants (j.g.), 48 lieutenants, 34 lieutenant-commanders, 20 commanders, and 4 captains.

By exchange with the Technology Bureau in Paris and the Alumni Office, this list is kept up to date and is in constant use by class secretaries, fraternities, department heads, and others to locate special groups of men in service.

From our office correspondence has been carried on with these men and with their families, and a fund of information has thus been assembled which has proved of great value in many emergencies.

No body of statistics can reveal the more subtle work with the men, but a lieutenant of artillery wrote a letter which showed that the men met the Auxiliary more than half way: "As a football team goes into the game with renewed vigor when cheered on by its supporters on the sidelines, so do our boys go over to France determined to win, for they know that the people at home are backing them to the limit."

A lieutenant of light railways writes since the armistice: "With what you folks at home have done for us along with the Tech Bureau over here, I have yet to meet a Tech man who does not feel that he belongs to the best college there is."

Just before he was killed Dinsmore Ely wrote from France: "One does not appreciate what Massachusetts Institute of Technology really stands for until he has left it and finds the spirit of Technology following him." It was to interpret this spirit of Technology that the Auxiliary put forth its efforts; therefore, to those who were for a time stationed in the government schools at the Institute, the care and hospitality of the Auxiliary were also extended. A special fund was created by the gifts of Augustus Hemenway, Esq., Mrs. Richard W. Sears, Mr. and Mrs. Henry F. Bigelow and Mrs. Oliver Ames, and this was used in the work with these men. A Boston Club Room was opened, Sunday teas were provided, and, at the request of the naval authorities, the hostess work at the Recreation Building of the Naval Aviation Detachment was maintained.

From January to November, 1918, 367 men from the government schools were visited in twenty-two different hospitals, with a total of 2709 visits made by accredited visitors. A patient at the Naval Hospital wrote: "We have often said that you looked after the navy pilots at Tech better than any other group of boys in the service was looked after."

These figures do not include the emergency demand made by the influenza. At that time convalescent homes were opened by Mrs. Cunningham at Westwood, by Mrs. Arthur T. Bradlee and her associates at Chestnut Hill, by Mr. and Mrs. Henry F. Bigelow at Lancaster, and by Augustus Hemenway, Esq., at Milton. Here convalescent care, with most careful nursing supervision, was provided for a total of 1399 days. Special contributions of more than $4000 made possible this work with the convalescents and the providing of extra nursing at a time when such care and nursing were very large factors in the recovery of patients.

Through the generosity of Mr. A. F. Bemis ('93) it was possible to respond to Colonel Cole's request that the Auxiliary take over the furnishing of nurses and special supplies to the Student Army Training Corps Hospital. From October 31 to December 23 a total of 151 patients was admitted to this hospital, and the application of Mr. Bemis's gift made a notable change in the welfare of these men. $2000 was available for this work, of which $1530.03 was expended.

During the few weeks when the S. A. T. C. and the S. N. T. C were mobilized at the Institute, Mrs. Henry P. Talbot and her committee extended the hospitality of the Institute to 284 members of these corps, who used the Emma Rogers Room as a meeting place with families and friends.

Before the great organizations which now distribute reading matter were in operation our Bookroom Committee distributed to the Institute men in camps here or on service overseas more than 5000 volumes of books of current interest, and there have been mailed to individuals between October, 1917, and February, 1919, over 1600 parcels of magazines and newspapers. We know that most of these reached their destination.

One who was most intimately associated with great numbers of Institute men on duty overseas writes: "I wish I could convey to you an idea of the value of the work which your Auxiliary has done for the men abroad. While the material aid accomplished was great, I feel sure it was exceeded by its moral value. It was the thought, first, that the women we left behind us were really backing us up, and second, that the Tech women were taking the lead over all other colleges in America. I want to take this opportunity of registering my appreciation of the magnificent work done by you all."

The workroom, which early in the history of the Auxiliary became a most important factor in meeting the needs of our men, presents a separate report at this time. It may be of interest, however, for you to have the following summarized statement of moneys received and expended through the Auxiliary and workroom.

Summary of receipts and expenditures from July 23, 1917, to February 1, 1919:

M. I. T. WAR SERVICE AUXILIARY

DR.		CR.	
Alumni Council	$18,500.00	Paid to Treasurer Technology Workroom	$12,650.00
Special Contributions	5,141.37	Paid to Treasurer Workroom—designated use	625.00
Hemenway Emergency Fund	2,115.00	Paid from Bemis Hospital Fund	1,530.03
Bemis Hospital Fund	1,530.03	Paid from Hemenway Fund	1,636.10
		Paid for printing, postage, office furniture, telegrams, cables, clerical assistance—19 months	6,143.29
		Balance on hand—general fund—February 1	4,223.08
		Balance on hand—Hemenway Fund—February 1	478.90
	*$27,286.40		$27,286.40

TECHNOLOGY WORKROOM

DR.		CR.	
War Service Auxiliary	$12,650.00	Supplies and overhead expenses to date	$26,055.30
Other Sources	14,156.80	Balance on hand February 1	751.50
	$26,806.80		$26,806.80

SUMMARY OF SOURCES OF INCOME, AUXILIARY AND WORKROOM

Alumni Council		$18,500.00	
Other sources:			
Auxiliary	*$8,786.40		
Workroom	14,156.80	22,943.20	
		$41,443.20	Total amount received by Auxiliary and Workroom.

NOTE.—Certain figures in this report are corrected to the date of going to press, April 1.—EDITOR.

It has been a high privilege to attempt to interpret the will of your committee in re-enforcing the splendid work of the men of the Massachusetts Institute of Technology, who have borne so noble a part in the war. If our efforts have been in any measure successful, it is largely due to the generous aid of the many friends of Technology who did a part of their war work through the Auxiliary, and to the unfailing cordial support of your committee.

Very truly yours,

ALICE N. GEORGE (Mrs. A. J. George),
Executive Secretary.

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*This does not include the sum of $4,000 and upward which was expended by individuals for work with convalescents at the time of the influenza epidemic.

ADDITIONS TO THE ROLL OF HONOR

February 4 — March 20

Fellows, Raymond H., '09, July 17, 1918. Private, Company F, 101st Engineers, 26th Division. Killed at Chateau Thierry.

Malcolm, Ralph R., '15, March 9, 1919. Sergeant, F Battalion, 105th Field Artillery. Died on way from France on steamship " American."

Patten, Harold K., '15, September, 1918. Died in the Naval Hospital, Pelham Bay, N. Y.

Smith, Charles McLean, '10, September, 1918. Died of wounds received in action.

Sommer, Henry Oscar, '15, September 29, 1919. 1st Lieutenant Machine Gun Company, 54th Battalion, 108th Infantry. Killed at St. Quentin.

Thyng, Elmer Forrest, '15. 2d Lieutenant, Company G, 1st Corps Headquarters. Deceased.

Tyler, John C., '17, September 18, 1918. Shot down by the enemy.

MacKay, George Lewis, '14, April 17, 1918. Killed in action.

Taylor, Ermond A., '20, February 19, 1919. Killed at Miami, Fla., when the seaplane which he was piloting plunged into the bay.

ADDITIONS TO THE CITED LIST

February 4 — March 20

Bagby, Ralph B., '16, 2d Lieutenant. Has been decorated with the Croix de Guerre and the Distinguished Service Cross.

Baker, Douglas B., '15, Captain. Awarded the Distinguished Service Cross for extraordinary heroism in action near Bois de Beuge and Bois de la Pultiere, October 9-15, 1918.

Chamberlain, S. V., '18, Private. Decorated with the Croix de Guerre on December 25, 1918 for devotion and courage in evacuating wounded from advanced postes de secours, July 15-17, 1918

Carb, David, Instructor, Department of English. Has been decorated by the French with the Croix de Guerre and the silver star.

Dickinson, Dwight, Jr., '08, Lieutenant. Awarded the Distinguished Service Cross, January 3, 1919, and the Croix de Guerre for engagement at Mont Blanc, Champagne.

Ohnuki, T. Riojo, '09, Captain, Japanese Navy. Has been decorated by the Emperor and the King of Italy.

Saul, Tom W., '10, 1st Lieutenant. Awarded D. S. C. for extraordinary heroism in action near the Bois de Lemieres, France, September 12, 1918.

Additions and corrections should be sent to Mrs. A. V. George, 491 Boylston Street, Boston, Mass., M. I. T. War Service Auxiliary.

SIXTY-SEVEN PER CENT OFFICERS

M. I. T. War Service Auxiliary Statistics — February 8, 1919

Men in service	2725
American Expeditionary Forces	991
Foreign Service	76
Aviation	459
Navy	529
Officers	1834
Ambulance, Red Cross, Young Men's Christian Association (A. E. F.)	71
Lieutenant-Colonel or higher	43
Cited	43
Deaths	97

It is interesting to note that with 2725 men in service and 1834 officers, we find 69 per cent of the M. I. T. men are commissioned officers. Harvard reports 47 per cent.

A CORRECTION IN THE HONOR ROLL

Concerning E. S. Couch, '17

In the March Honor Roll, furnished to the Review by the War Service Auxiliary, the item about Edward S. Couch, '17, should read:

2d Lieut., P Co., 1st Bn., 22d Inf. Death by accident, February 6, 1918, at Fort Leavenworth, Kansas.

POPULAR INSTRUCTOR DECORATED

David Carb, formerly instructor in the Department of English from 1909-1915 when he left to enter the ambulance service, is now an officer in the French Artillery and has been decorated for his services with the Croix de Guerre and the silver star.

DAY OF WRATH

Prof. Leonard M. Passano

I

I have fallen on evil days, on the days of fire and the sword,
When the Spirit has gone his ways and Jehovah is God the Lord;
When the Holy Spirit returns to the mouth of God who gave,
And the crucified Saviour learns to lie in unrisen grave,
I am dead; my glorious birth is a mock in the mouths of men,
When for one who cries," Peace on earth," the criers of war are ten.
What profit to die and suffer? What profit to rise and save
If man refuse my offer and the old gods spring from my grave?
They arise from my grave and pass to my kingdom on earth. It is well!
I yield them my place, but, alas! They rose to my grave from Hell,
With the fire of Hell in their left hand, the hatred of Hell in their right—
My kingdom of peace is bereft and my children are lost in the night.
With the murder of Hell in their heart and the craft of Hell in their brain—
My children are scattered apart, and my kingdom of peace is pain.

II

A king arose in the East, taking my name in vain;
A king, with the mark of the beast, of a race with the mark of Cain,
Fulfilled of cunning and guile, faithless, cruel with hate,
And ravened for a while, lusting for my estate;
Pillaged, ravished and burned, tortured, betrayed and killed;
My priests and shepherds spurned, the blood of my little ones spilled.
The little ones that I cherish are trodden to earth and die;
But the murderer shall perish and render an eye for an eye.
He shouted my name in vain. Ere the echo returns to his ears
For a handful of earthly gain he has deluged the world with tears;
For a handful of earthly lust fills the world with fire and flame,
Casts my temple in the dust, and doeth it in my name.

III

For the babe whom the mother suckles, for the woman who travaileth,
His hand the sword belt buckles and the woof unraveleth.
His hand unsheaths the sword, cuts the warp and shatters the loom
Whereon, with the help of the Lord, through ages of toil and doom
Man, woman and child have striven, in the sweat of a little life,
To weave, whether driving or driven, a garment unmarred by strife;
A garment of peace, whereunder their naked spirit, enfleeced,
Shall not cry aloud and blunder in the nakedness of the beast.
The garment is reft, and woe to the hand by which it is riven!
I have spoken it, as ye know, " Offense to my little ones given,
To the least of my little ones, tender, and helpless, and weak, falls on me.
It were better by far the offender were drowned in the depths of the sea."

IV

Your shoulders shall bear the burden. Ye shall bow to the earth and die.
The day of my wrath is your guerdon. Denied, I, too, will deny.
My hymns ye have made the wailing and groans of a world at strife.
My love is unavailing and hate is your law of life.
So, now thou shalt pay, O, king, beaten and seeking peace!
The lash of my whip shall sting and the sting of the welt increase.
And the world shall say: " When he offers his hand in peace and good-will,
Strike, for the hand he proffers is armed, and he means to kill! "
His hand is armed with treason; let your heart be armed with mistrust,
So the victor for a season shall fall and bite the dust.
He took what his heart did covet; took whatever his hand could get.
And war—taught his children to love it, the infant's prattle a threat.
But now the shadow of death hangs over him and his lands.
He shall vanish as a breath, as a footprint on the sands.

V

The king is dethroned and all kings have fallen to low estate.
In this thing, as in all things, the times are growing late;
Too late for the old oppression! Too late for the ancient wrong
Bequeathed, as a sole possession, to the people through ages long!
For the sweat of mankind has watered the earth and a new crop springs
From the soil of nations slaughtered—soil fattened by rotted kings,
By kings and rulers, oppressors; by all who have lived at ease.
For the people, the dispossessors, have spoken: " No more of these! "
" In the sweat of thy brow thou shalt labour, shalt labour and eat thy bread."
Was said, without fear or favor, of all—of the quick and the dead;
Of the living who bear the burden, and the dead, the burden they bear;
The dead in spirit whose guerdon is sloth and freedom from care.
But the evil days shall quicken, shall quicken the dead, and go;
And out of the world thus stricken a fairer world shall grow—
A world wherein who toils shall have, and who labours not
Shall no longer possess the spoils unrighteously begot.

VI

I have fallen on evil days, on the days of fire and the sword;
But earth shall return to my ways and follow me, Christ the Lord!
The doer of evil is broken, and earth proclaims my praise.
The Holy Spirit has spoken, my Father of endless days.
I have redescended and risen, hand in hand with the sons of men.
We have loosed the bonds of our prison and stand erect again;
Chastened, erect and free. So hatred and war shall cease,
And mankind follow me in goodness of will and peace.

FRANK EVERETT PEABODY, '77

Died September 28, 1918

Frank Everett Peabody was born in Boston, February 29, 1856. His father was Francis H. Peabody, one of the founders of the banking house of Kidder, Peabody & Company, and his mother was Adelaide Kinsley of Canton. His grandfather was the late Rev. William B. D. Peabody of Springfield, who did much to advance the cause of music as a factor in the services of the old-time churches.

Mr. Peabody inherited much of the musical genius of his grandfather and was deeply interested in music. A pipe organ at his residence on Commonwealth Avenue gave him an opportunity to follow his musical tastes and he was a skilful performer. He took an active part on the Music Committee at Kings Chapel and gave the present organ in memory of his son Everett Peabody.

He received his early education in private schools in Boston and later in the English High School from which he entered the Institute in 1873 and was associated with the class of 1877 for two years. At the end of this period he left the Institute to enter the banking business with his father, and which he carried on with great energy and ability up to the time of his death. He formed many friendships at the Institute among his classmates and professors, who recognized his ability and his close attention to his work. Since severing his connection with Tech he has always attended the annual class reunions when possible, and the class members will all miss his genial manners and hearty welcome. His contribution to the Herbert Jacques Fund assisted materially in the liberal amount raised by the class of '77. This fund has been devoted to the establishment of hospital wards in France and England. His loyalty to the Institute was manifested in the generous bequest of $50,000 to Tech at the time of his death. The spirit of giving was a strong point in his creed, and his contributions for charitable purposes and to individuals needing a helping hand were given in such unostentatious way, that only his nearest friends could realize the extent to which they were carried. The example thus presented may well be followed by all of us to such a degree as we are able to help our fellowmen.

In addition to the banking business he held many responsible positions in the business world. He was a director in the Boston Elevated Railway Company, The Scotia Worsted Mills, and Northern Texas Traction Company. He was a trustee of the New England Conservatory of Music. He was interested in various athletics and belonged to the following clubs: Algonquin, Boston Art, The Country, St. Botolph, Somerset, Union, Exchange, Eastern Yacht, New Riding, Norfolk Hunt, Oakley, Tedesco and Automobile Club. He was interested in golf and was president of the Tedesco Country Club for many years. His summer home was at Marblehead Neck and his winter residence at 120 Commonwealth Avenue.

He was married in 1882 to Miss Gertrude Bayley and had two children, Everett Peabody who died in 1900 and Miss Amelia Peabody, who with her mother survive him. His life of usefulness and good deeds will live forever in the memory of all who came in contact with him and will leave its impress in making a better world.

FRANK EVERETT PEABODY, '77
Died September 28, 1918

Strauss Portrait

CHARLES L. HARRIS, '77
Died February 22, 1919

A COMMANDER OF THE LEGION OF HONOR

Poland, '90, wins yet greater honors as food director for Europe

William Babcock Poland, of the class of 1890, has recently been made commander of the Legion of Honor.

Mr. W. B. Poland graduated from Technology in 1890 from Course I, and while a student at the Institute was one of the most active men of his class. Dean Burton tells us that he was a live wire at the Civil Engineering camp, then in the Catskill mountains, and one of the most popular of several men who have since distinguished themselves.

His first position after graduation was with the Baltimore & Ohio Railroad as civil engineer. Here he remained until 1909, when he became vice-president and, contemporaneously chief engineer of the Philippine Railway Company, with his headquarters at Manila. During two years he was a great factor in the development of the road, and at the end of this time accepted the dual responsibility of chief engineer and general manager of the Alaska Central Railway Company. After holding this office for three years, he came to act in the same capacity for J. G. White & Company of New York.

In the latter part of 1915, Mr. Poland associated himself with the Belgium Relief Commission, and subsequently, in the spring of 1916, he went abroad under Mr. Herbert C. Hoover, where he has been on active duty ever since.

The tenth of July, 1917, saw the Cross of Chevalier of the Legion of Honor conferred on Mr. Poland, who was at that time director in Holland of the American Commission for Relief in Belgium. The cross was bestowed in "consideration of the courage with which you denounced before the German authorities and the American Government the deportations made in northern France." At present, Mr. Poland is Food Director for Europe, and was acting in that capacity when this latest and superlative honor, a commission as commander of the Legion of Honor, was accorded him.

A CORRECTION FROM C. T. MAIN

"In the last issue of the Technology Review, January, 1919, there appeared a notice of the appointment of Professor Swain and myself on the Engineering Delegation to visit France. The description of my work was in error and if you desire to have a correct record for any future use, I would suggest that the following change be made, where it reads, 'when he became connected with the Manchester Mills of which he soon became superintendent and engineer. For a time he was also with the Pacific Mills.'

"This should read as follows—'when he became connected with the Manchester Mills and remained there about fifteen months as draftsman. From there he went to the Pacific Mills as engineer, which position he held for about five years, and for six years was superintendent and engineer. Very truly yours,

Charles T. Main, '76."

FELAND OF THE MARINES A GENERAL

Technology man of '92 — four times decorated for gallantry — was at Belleau Wood

Secretary Daniels authorizes the following:

Col. Logan Feland, commanding the Fifth Regiment of Marines, now serving as a part of the army of occupation, is made a brigadier-general in the Marine Corps to fill the vacancy caused by the retirement of Brig.-Gen. James E. Mahoney on March 8, who went to the retired list at his own request after forty years of active service.

The promotion of Colonel Feland comes as a result of his exceptional war record, which includes service from the time General Pershing and his staff arrived in Europe until the present. As commander of the Fifth Regiment Marines, Colonel Feland was in action from the time of the bloody fighting in Belleau Wood early last June right up to the final engagements just before the terms of the armistice became effective.

For his gallantry and distinguished services, Colonel Feland has been awarded four decorations: The distinguished service cross and the croix de guerre with the bronze star, gold star and palm. Three times he was cited in French Army and Corps Orders for bravery in the battles of Belleau Wood, during the Soissons drive and in the Champagne sector. He was also cited in American General Orders on July 15, 1918.

When General Pershing sailed for France on May 28, 1917, Lieutenant-Colonel Feland went with him as a member of his staff, in which capacity he served until the arrival of the Fifth Regiment of Marines in France in June, 1917, when he was relieved from staff duty and assigned to this regiment. He fought with the Fifth Marines throughout the war and is its present commander. He was promoted to the rank of colonel on July 1, 1918.

Colonel Feland was awarded the distinguished service cross by the commanding general of the American Expeditionary Forces on July 10, 1918, for gallant conduct in action at Bois de Belleau from June 6 to 14. He was decorated with the French croix de guerre with bronze star July 10, 1918, having been cited in Regimental Orders of the French army for distinguished conduct in action June 6 to 9, 1918. He was cited in General Orders No. 40, Headquarters, Second Division, American Expeditionary Forces, July 5, 1918, and was further cited October 25 in Army Corps Orders by the commander-in-chief of the French armies of the north and northeast, and awarded the croix de guerre with gold star for distinguished service during the action of July 18, 1918. In this engagement his regiment drove the enemy back eleven kilometers and captured 2700 prisoners, twelve cannon, and several hundred machine guns. He was further cited by the French commander-in-chief on October 28, 1918, and awarded the croix de guerre with palm, and in Regimental Orders was cited again on November 15.

General Feland was born in Kentucky in 1869. He served with the Third Kentucky Infantry during the Spanish-American War, and on July 1, 1899, was appointed a first lieutenant in the Marine Corps. He served through all the various grades up to colonel and has seen extensive service, both at home and abroad. General Feland's mother, Mrs. Sarah Feland, lives at Hopkinsville, Ky.—Official Bulletin.

SAFETY AND HYGIENE IN VOCATIONAL WORK

By J. Albert Robinson, '02

Research Engineer for the Federal Board of Vocational Education

We ought to know more of what the Federal Vocational Board is doing, not only because one Technology man, James P. Munroe, is one of the chiefs, but because others are working in the rank and file. The Review would like, since Technology men on the whole write so little, to print the important articles from their pens. We are glad, therefore, to lift this from the December number of the official organ of the Board.

In presenting the reasons why the Federal Board, under the direction of the Research Division, has taken up the question of safety and hygiene, how this work may be made helpful to our vocational schools, and why such work is a vital necessity for the welfare of, and essential to the curriculum for such schools, and other educational institutions that may come within the jurisdiction or influence of the Federal Board, several points of view suggest themselves.

First, the preservation of the life and health of the students and teaching staff, the protection of the property in which such instruction is carried on, and a partial guarantee, at least, of the uninterrupted work for which the schools are created, and to which the students have been intrusted.

A humanitarian interest in the welfare of both teacher and students and a righteous desire to avert injury and disease, pain and suffering, or sorrow and death are sufficient incentives to prompt the consideration of fundamental features of fire prevention, safety and hygiene, as applied to vocational schools. We have in preparation a bulletin of a general nature designed to offer suggestions along these lines.

The following facts offer sufficient evidence for the practical need of giving some consideration to these all important matters.

The aggregate fire loss in schools and colleges has reached $5,000,000 in a single year, with an average, over a considerable period of time, of one fire per day, and over one hundred distinct large loss fires per year. The rate of burning is increasing rather than diminishing, and the repetition of some of our shameful national tragedies, such as the Collingwood holocaust, and others, await only the right time and the right kind of a day. Let us see to it that a vocational school never lends itself to such an occasion.

One of our authorities on industrial mortality has estimated that the deaths among adult male wage earners, due to accidents, amount to 35,000 a year, and that the non-fatal injuries of industrial occupations cannot be much less than 2,000,000 additional. It has also been estimated that these accidents and accidental deaths produce an economic loss of $500,000,000 annually. Vocational schools are preparing the industrial workers of the future. Upon these schools rests a great moral obligation to give proper instruction in the fundamentals of safety.

The war has made us newly conscious of the number physically unfit for military service. Under the first selective draft 730,756 men were rejected for physical reasons after examination. This was twenty-nine per cent of the total number actually examined by local boards. Thousands of these could be made fit by proper treatment, or their disabilities would have been avoided had they had instruction in hygienic principles. The economic loss due to occupational diseases which attack workers on account of the nature of their employment and the unsanitary conditions in which the work is carried on amounts to three-quarters of a billion dollars annually. When we realize the loss of productive powers due to remediable defects and ill health that might easily have been avoided, the importance of this subject becomes apparent, and no time should be lost in giving it consideration.

Besides having a moral obligation to protect the lives and comfort of the students assigned to their care, school authorities have no less an obligation to deliver the goods for which the students have come at a period in their lives of maximum enthusiasm and with a minimum of time at their command. A partial guaranty, at least, is insured by so protecting the property and safeguarding the lives of those within that a continuity of effort may result and the loss of individual time by injury or disease may be avoided.

Second, the formulation of outlines for simple, practical courses of instruction in fire and accident prevention, personal hygiene, and prevention of occupational diseases, for use by vocational teachers, and we hope later amplified into actual text-books for use by the students themselves, both in class instruction and as guides for conduct to be practiced within the confines of the schools during their social and civil life outside, and while pursuing their industrial or business careers to follow. We also hope to suggest and outline more technical studies in the more advanced trade schools, scientific institutions and colleges which will encourage the students to give consideration to the fundamentals of safe machine design, methods of proper building construction, and other considerations which will aim at the elimination of the causes of these hazards.

We believe that the vocational schools, by availing themselves of our work in safety and hygiene, have an unprecedented opportunity to inculcate these fundamental principles at the most fertile source both to safeguard the individual and to so reconstruct his mind and point of view that he will become a valuable disciple among the less informed workmen with whom he will later associate. Furthermore, those who advance to the status of employers will appreciate the needs for the vital things which have been impressed upon their minds and will become real factors in establishing a new era of social betterment.

Third, a practical interest centers in the consideration of the legal aspects governing the responsibility of the vocational school authorities and instructing staff for accidents occurring to the student while using machinery during the courses of instruction, and their moral obligation to do all in their power to reduce these hazards by every means within their command.

It has been generally held that there is no liability if those in authority have taken reasonable precautions in protecting dangerous machinery by the use of ordinary safeguards, exercised care in giving instruction to the pupils in the use of such tools and machinery, and provided competent teachers for such work. It is, furthermore, generally held that a vocational school in which power-driven machinery is used for the purpose of instruction is not a factory in the meaning of the law, hence not subject to the provisions of the law relating to the use of dangerous machinery. However, it is quite possible that the failure on the part of a board to adopt definite rules or take adequate precautions relative to the use of such machines might be deemed a negligence for which the board could, with reason, be held responsible to such state, fire, marshal or laws governing fire prevention and exit-drill features as may exist, but observance of the letter of the law only should not be considered when such may be obviously inadequate.

In view of these considerations, based on good ethics and sound economics, it is

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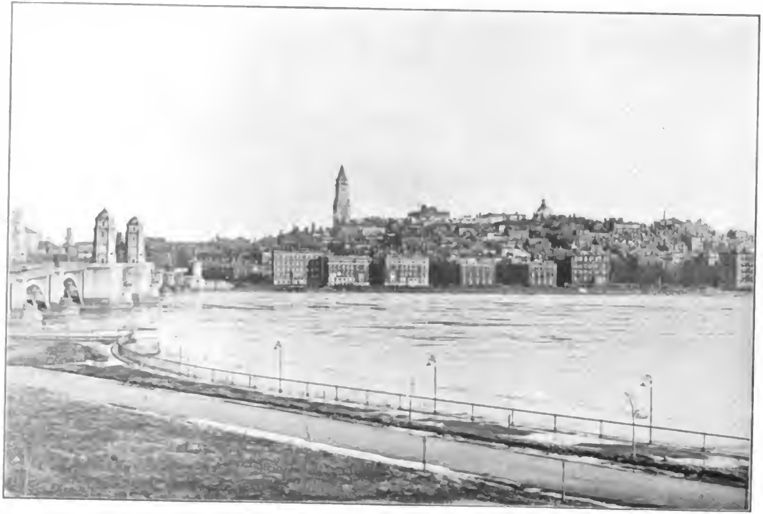


VIEW OF BEACON HILL FROM THE LIBRARY

apparent that vocational schools ought to go even farther than required by laws governing schools and factories, and the complacently accepted customs of social and industrial life, in eliminating or safeguarding hazards and carrying out fire and accident prevention works, teaching proper hygiene and eliminating the dangers of industrial or occupational diseases. What more natural, therefore, than the study of safety and hygiene by the Research Division and the establishment of a helpful source to which the schools may turn for aid and by which advice may be given? The concrete results in the improvement of human relations thus obtained should be both evident and inspiring.

Vocational schools have been intrusted with an immediate patriotic duty in connection with the vocational rehabilitation of disabled soldiers and sailors, and the industrial placement of discharged men in the service, this work having been placed in charge of the Federal Board under the terms of the vocational rehabilitation act. These young men have been disabled or diseased while serving their country at the call of duty. For this noble service and sacrifice we owe them a debt that can never be fully repaid. The least we can do is to see to it that we do not allow our school and industrial systems to subject them to further dangers and horrors while pursuing courses of instruction aimed to make them useful and contented citizens or economic and social assets. Most assuredly we have an immediate patriotic duty, both the vocational schools and the Federal Board, which is a consecrated obligation, to so protect these young men during their period of vocational education, and to so instruct them in the fundamentals of safety and hygiene, in whatever course of study they may elect to pursue, that they will be forever removed from these industrial and social menaces, or at least cognizant of their lurking presence, so that they may be on guard to cope with them as they arise. It is upon this work that we are now concentrating, in order to be of immediate help to the schools presenting courses of study in various vocations. In connection with each outline of a given course of study, we will present the hazards of that particular vocation with the safeguards therefor.

We have a future vision of some means to provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment. This could be brought about by suitable legislation patterned after the original vocational education act, whereby the states could accept the act, and receive federal financial aid in proportion to their populations, provided the states furnished an equal sum of money; each state to co-operate through suitable state boards, such as the vocational education, workmen's compensation, or other suitable agencies, with the Federal Board for Vocational Education. The Smith-Bankhead bill, now before Congress, provides for the promotion of vocational rehabilitation of persons disabled in industry or otherwise, and their return to civil employment, the details being patterned after the original Smith-Hughes Act, and the Federal Board for Vocational Education being empowered to carry on this important work.

The need for such work is made apparent by giving thought to the following statistics which have been prepared covering five common disabilities, as follows: Loss of hand, arm, foot, leg, and eye, or the use thereof. The statistics show the average age of the wage earners receiving these injuries to be between thirty and thirty-three years. It is reasonable to assume that men of this age may continue to be wage earners and effective units in our industrial systems for a period of twenty years. Yet this chance is denied to at least fourteen thousand American wage earners who suffer one of the five disabilities previously mentioned, and many more thousands suffer a disability so great as to become permanently crippled and thrown on the human scrap heap, or so injured as to be denied their former vocation and generally left to shift for themselves without an opportunity to be trained for a new means of obtaining a livelihood. It is safe to say that there are several hundred thousand such desolate human sacrifices in this country today who never had a chance, yet who would welcome the opportunity to be rehabilitated in a way to become useful, self-supporting, and self-respecting citizens.

In view of these facts, we are justified in considering our vision as epoch making in its scope, and we believe not too altruistic to be in harmony with the spirit of the times. Our watchword is service to our industrial unfortunates with the creation of a new hope in their breasts.

This article has outlined a few of the essentials for the fruition of our aspirations; vitality will be given our efforts if our work in safety and hygiene is utilized to the utmost by those whom we aim to serve.

AN ALUMNA IN PALESTINE

Also an alumnus

One of Prof. W. T. Sedgwick's women students of last year in biology and public health, Miss Clara McWhirk, has just received an appointment as bacteriologist for the Red Cross Commission in Palestine. Miss McWhirk on leaving the Institute went to France in the Bureau of Medical Research and Intelligence of the Rockefeller Foundation and she has just been commissioned to go with the Palestine group. The Red Cross is maintaining a regular American hospital in Jerusalem of fifty-five beds, and in connection with it a thoroughly equipped laboratory, and dispensary, a children's hospital and clinic and workrooms. In the latter more than fifteen hundred women of all races are at work on garments, hospital supplies and the like.

Another of Dr. Sedgwick's former students, Samuel M. Schmidt, '11, has already been in the Holy Land for some months as sanitarian to Dr. Finley's commission. Mr. Schmidt was for a while inspector with the health department of Boston, went next into social settlement work in this city, followed the same line of work in Cincinnati and returned to Boston a short time before being sent by Dr. Finley to Palestine.

ATTENTION PLEASE

Old numbers of the Review wanted

The Alumni Office finds itself without sufficient copies of the November, 1918, and January, 1919, issues of the Technology Review to supply the demand of the unusually large number of new subscribers.

Will those subscribers to the Review who do not wish to keep their copies of the November, 1918, and January, 1919, issue for binding or for permanent reference please notify the Alumni Office that the copies are available, and postage for the return of these Reviews will be forwarded.

THE INSTITUTE'S FIRST NEIGHBOR

Is also one of her children—A. D. Little's new laboratory on the Charles

"As Franklin brought lightning out of the clouds, so Arthur D. Little, '85, has brought chemistry from its academic remoteness in the high seats of learning down into the very heart of the business world." So begins the "American Architect" in its description of Mr. Little's new plant.

Chemists of the Middle Ages, the article goes on to say, bent all their efforts to transmute baser substances into gold. Our more recent chemists have had no fixed purpose in their experimentations, but have loved the abstract study of the elements, and the spirit of adventure among strange forces has kept them eager. Now the wheel of fortune brings us back the old alchemist, Americanized, a man who turns all the baser substances to gold. The baser substances are given an enhanced value, and the gold flows into the pockets of this alchemist's clients.

If you want to buy your coal by the B. T. U., paying for heat instead of weight, and getting something that is designed for the cellar rather than the roof, here you can have it arranged for you. If your mill is embarrassed with a seemingly useless waste product, here you can be shown for a modest fee how to convert it into a profitable commodity of commerce. If you are not certain about the quality of the article that you are buying, whether that article be wool, copper, dyestuff, maple syrup, soap, gasoline, flour, tracing paper, horse-radish, shoes, or T. N. T, no matter what your doubts, they will be dispelled at this breeding-place of miracles. The acid test will be applied and you will know the quality of your purchase and consequently its market value, without the uncertainty of the written guarantee of trade.

In order to perform miracles regularly on a business basis from nine to five, week days, Aladdin has built him a cave on the Charles River Basin a couple of minutes from the heart of Boston. The cave, which harmonizes on the outside with the Institute buildings not far away and which is a genuine asset to the beauty of the Basin near the West Boston Bridge, is the work of two other Technology men, Kilham, '89, and Hopkins, '95. We print somewhere or other in this issue cuts of the outside of the building, the view of the basin therefrom and a couple of interiors.

This cave contains one of the most complete organizations conceivable. On the first floor are the administrative offices, a publicity department, a bookkeeping and filing department, and an industrial chemistry museum. The second floor houses the only special industrial chemistry library on record, a draughting department, a number of special research laboratories and a large laboratory and offices for general research. The top floor has a general analytical laboratory with offices, and special laboratories for fuel analysis, microscopy, paper testing, photography, textile work, water analysis, metallography, etc. At the western end of this floor is a lunch room with kitchen for serving the entire staff.

The basement contains one of the most important items of the entire organization, a complete pulp and paper mill for the experimental manufacture of all grades and kinds of paper, and the determination of the paper values in various waste products of other industries. At the western end of the basement is a large laboratory for full-size tests to supplement smaller laboratory tests made upstairs. These tests are called " try-outs." The remainder of the basement is occupied by coal preparation rooms, grinding room, shop, stock room, with electric lift to subsidiary stock rooms on the various floors above, sample storage and file rooms.

This, roughly, is the list of activities provided for. Such a program requires a very complete mechanical equipment. The laboratories are supplied with steam both high and low pressure, vacuum, compressed air, hot and cold water, distilled water, gas, electricity for light and power, direct and indirect phases and varying voltages. This requires gangs of pipes in every part of the building, with hundreds of outlets at the benches. The pipes are run in parallel groups, exposed in the rooms and on the basement ceiling. The pumps for vacuum and compressed air are automatic, and the ports in the laboratory cocks are nicely adjusted for vacuum, etc.

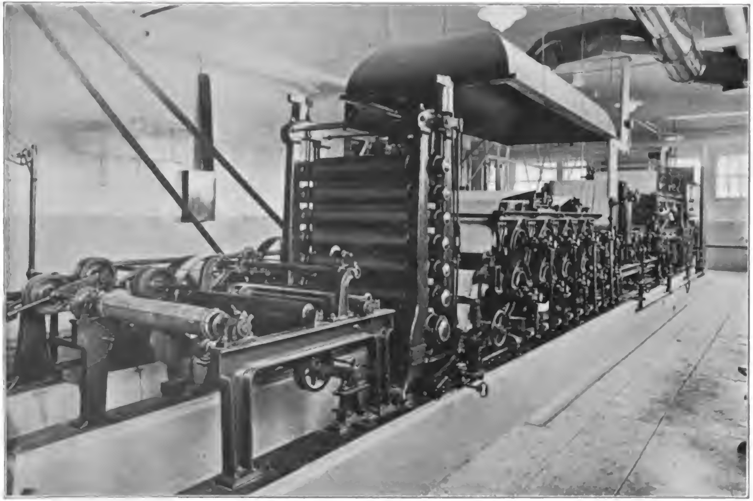
The general construction of the building is fireproof, with a minimum of steel, floors and roof of floretile construction and piers of concrete. All construction bays are equal, so that the building can be repartitioned at will to form new room units. The floors are finished in linoleum, except the main laboratories which are red tile, and the corridors and toilets, which are terrazzo. The walls are hard plaster, painted.

For the comfort of the employees the company has provided not only the lunch room, but ample rest rooms, bubbling fountains and a roof terrace over the one-story " L ". Under one roof, therefore, are housed all the many activities of a new and interesting industry, offices, laboratories, lunch room, library, museum, and publicity department. If any facility were wanting, good neighbors are not far away, for the building itself is alongside the new Massachusetts Institute of Technology on the esplanade.

For a more detailed account of what the Little organization is doing, it is by all means best to let Mr. Little speak for himself in his little brochure " Chemistry in Overalls," because for sheer good-humored cleverness of phrase and attack, the Little publications are hard to equal. Their house journal is full of " most excellent jesting " and they are glad to send it abroad to spread the gospel.

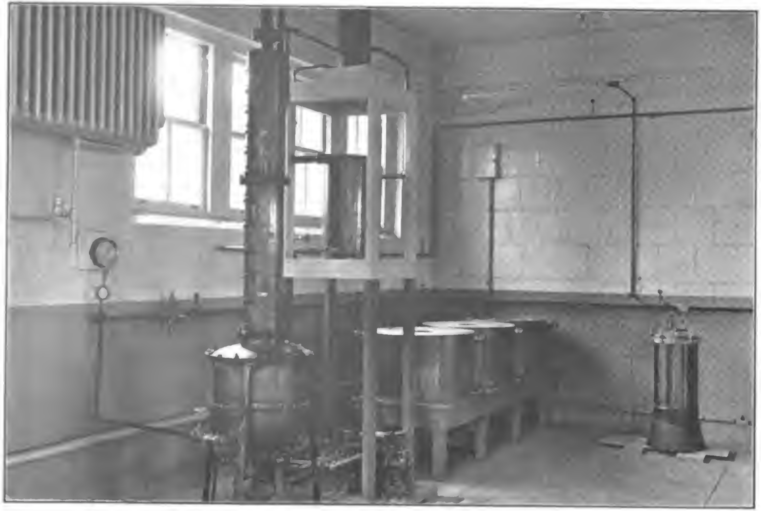
DISTINGUISHED FORMER PROFESSOR DEAD

Prof. Edward C. Pickering, director of the Harvard College Observatory at Cambridge, Mass., since 1876, died at Cambridge February 3, at the age of seventy-two. He was graduated in 1865 from the Lawrence Scientific School and from 1868 to 1876 occupied the Thayer chair in physics at the Massachusetts Institute of Technology. Here he established one of the first laboratories used in student work and wrote a textbook on "Physical Manipulation" which has long been regarded as a standard. He was the recipient of many degrees and medals from universities, scientific institutions and societies and attained an international reputation in the astronomical field. In the varied and exhaustive investigations carried out under his direction electrical methods were brought to a high stage of development, notable in connection with the Harvard Observatory's equipment and that of other astronomical plants which have interchanged ideas with the Massachusetts Institute of Technology.



EXPERIMENTAL PAPER MILL

THE PAPER MACHINE WITH DRIERS AND CALENDERS



COMPLETE RECTIFYING STILL, TWENTY-FIVE GALLONS CAPACITY

H. M. WAITE, '90, ON THE RHINE

One of the most interesting accounts we have seen anywhere of the actual conditions in Germany shortly after the signing of the armistice, is that which follows, which we are glad to be able to reprint through the courtesy of J. E. Barlow, '05, from Colonel Henry M. Waite, '90, former City Manager of Dayton, Ohio. We commend the last sentence to the attention of Tech men.—Ed.

NOT far from Christmas and I am a long way from home—but still hoping.

I wrote to Barlow of some of my experiences with the army in the advance section. We had a lively time keeping up with the third army on its advance. It was a wonderful advance and will be written up some day as a military achievement. However, they reached the German frontier and thank the Lord they were held there a few days by the armistice. This gave us a breathing spell. We smoothed up some of our hurriedly built railways, got others connected and commenced to work on the second mains. We had had only time to get one track through by using material from the second, and we were then on the well established and efficiently run and undamaged railways of the Duchy of Luxenburg and Alsace-Lorraine.

I had had quarters in Luxemburg for several days and was beginning again to have what seemed the luxuries of life—a hotel with steam heat (a little part of the day).

Just as I was ready to sit back and see things run, I got orders to report to advance general quarters to have part of the utilities and public works under the civil affairs in the occupied territory. My Dayton experience got me that, I suppose.

I sent my baggage to Treves and was all ready to follow when the German high command asked for a technical commission to go to Coblenz and consult with the German staff about the details of occupation, particularly in the Bridge Head.

I was chosen one of three, afterwards two more, and we beat it for Spa to get more instructions and information.

Then I had my second awakening as to the comfort of life— dugouts improve as you get away from No Man's Land. We found our armistice delegation housed in a magnificent house located in a big park or estate. It was Von Hindenburg's headquarters.

We were shown into an immense living room, a large table with magazines, rugs, pictures, large easy chairs, steam heat (put in by the Germans) and a large fireplace with a roaring American fire.

Never will I forget that picture after a cold ride of five or six hours. It was an American club setting, and I wanted to be ordered to Spa permanently. We had dinner then, having some wine carelesslyleft by Von Hindenburg—he is a good judge.

Next morning we had a meeting at French headquarters, a large, beautiful house in same grounds, which was used by the Kaiser. They all had bomb-proof cellars. Von Hindenburg's lead down from the cellar of the house. It had a table, rug, chairs, electric light, fan and heater and telephone and about twelve feet underground and of concrete. He was safe unless they undermined him.

From there we beat it for Coblenz. That was an interesting trip. We had to pass through French and American lines. It was the fourth of December and we had begun our advance into Germany.

If you want a pleasant drive get on a road full of advancing troops, with wagon and truck trains, particularly on a muddy, rainy day, when there are a few in the ditch or crosswise of the road. There is another class of driving, however, which is more exciting. That is to be in a big hurry some rainy or foggy night at the front, when no lights are allowed and the muddy roads full of troops and truck trains going in both directions. How it is done I don't know, but you get through somehow. Of course, it does one thing, it makes you stay on your side of the road, and every one else. So you are all right until you start to pass some truck train. Then you sit up and take notice.

The trip down the Moselle is a wonder. We had most of it by daylight. After we passed our front outposts we had clear sailing until we caught up with the Germans. We, of course, were some curiosities, and were gazed at coolly but civilly. After dark we heard once or twice, "Heraus mit em." We decided that might have been caused by the fact that we had a limousine and rubber tires and they took us for royalty.

Whenever we stopped and asked directions they were promptly and courteously given. When we got to the outskirts of Coblenz the German soldiers were thick but they gave us the route. A woman said she would show us the way, so she got in the car and directed us to police headquarters, the haven, I presume, of all suspects. She was very much interested to know if we were first Americans. When she was told yes, she was much pleased. As long as we were at police headquarters we had them send word to the German staff that we had arrived. We went to the Coblenz Hof, which is right on the Rhine. The fact that it was German headquarters did not hinder us, but it embarrassed them from the surprised way the officers and men looked at us.

Here was another terrible shock. We understood it was the best hotel. It was as modern as any American hotel. Large, comfortable rooms, good furniture, twin beds, pink silk comforts, large, modern, tiled bath rooms, steam heat and oceans of hot water. We delayed all diplomatic relations and took a much-needed scrub, my first for some time.

To save any embarrassment we had dinner in our rooms. Punk food, a tasteless soup, boiled meat, potatoes, cabbage, and something they had the nerve to call coffee—hot and brown. We afterwards found it was made of beets. The bread we could not eat, fortunately we bought some bread and canned meats, but no coffee.

In an hour after a German meal I am as hungry as before. They are very short of grease. We put out an S. O. S. call and had some American supplies sent up. We felt we were being given the worst they had for effect and knew they did not have any too much.

They are desperately short of cotton and cloth. The table cloths are of crimped paper, napkins papers. The bandages used in the hospitals are rolls of crimped paper. Most of the twine is paper, gunny sacking is made by weaving threads of paper. It is surprising how strong it is. Electric wires are insulated with paper. Some have a very thin covering of linen, then waterproofed.

Their soap is made of clay, colored, scented and enough soda to cut the dirt. I saw a German being shaved. They rubbed his face with something that sounded like sand paper.

Our first meeting with the Germans that night was interesting. They came in with sabers, side arms and their cute little trench knives—with tassels. Afterwards we counted up and found there was one pistol in the crowd and it was in his cot. They removed the side arms. Later they asked if we objected to the sabers. We told them no, it was not a part of our field equipment, the Sam Brown belt took its place. They clicked their heels and bowed—we clicked and did so. Now every time I open my mouth I click my heels. They are a wonderfully efficient lot.

Next morning we had wonderful opportunity to see the German army cross the Rhine. The hotel was directly in front of the old pontoon bridge. They passed in review in front of the hotel. It was a foggy morning and you could not see across the river. The bands played, colors flying, wagons and horses trimmed with green and colored paper. Some wagons had four Christmas trees, one at each corner, decorated with paper. A noticeable lack of trucks and many little Russian horses.

As the officer at the head of each company reached the reviewing officers, drawn up on horseback in front of the hotel, every man in the company as of one voice yelled "Hoche." Women were in the street giving the men cigars, cigarettes and post cards. As they approached the bridge the band played, "Wacht am Rhine." The men would sing and they, with the colors, would disappear into the fog. All in wonderful order and discipline. This was the defeated, humiliated and crushed German army. The question continually arose in my mind, what starts and ends war?

Of course, we saw the best of it. That wonderful German rear guard. They play tunes on machine guns. As rapidly as they retired to the Rhine everything was left perfectly policed behind them. No dirt or rubbish, everything cleaned up. The last division on the bridge was the 76th, a Bavarian division, and was in front of us in the Argonne. Some fighters, but they say the same of our men.

I stayed in Coblenz in that wretched dugout for two weeks and saw our first troops come in. Let me tell you they looked good. The first was a battalion of the 9th, which came up by train to act as guard, on request of the Germans, after the Germans had left and before our troops arrived. They got there on a Sunday. We went out to see them detrain. Let me tell you the Germans had nothing on us. As they went down the street no bands, no colors, no noise, just business. You should have seen the Germans watch them. There was one interesting fact. In all the German troops that passed not one imperial flag was carried and of all the flags that were out in Coblenz I only saw two imperial flags. When our troops arrived not a German flag to be seen anywhere.

I have had some very interesting work with the various local and provincial German governments. We get everything we ask for and quickly.

I had to go to Cologne a few days ago and for a stretch of about fifteen kilometers, twelve of it were paved and for the most part with Durax. They use a larger stone than we do in the streets and roads, about an inch larger. They also use it in sidewalks, using a block about the same size we use in the streets. If the war had lasted a few years longer Germany would have had many of her principal roads paved.

Here in Treves the city owns its water works, electric plant and street railway. The electric plant is quite interesting—two steam plants and one hydro electric. They distribute power and light all through the surrounding country and it pays well. The indebtedness on it was sixteen marks, now reduced to twelve marks. They must retain so much each year. During the war they have raised the rates fifty percent without a murmur. All they do here is post a proclamation, the people read it and go do it. The oberburgermeister in Coblenz issued one while we were there and before the army got there—everything to close at 11.00. Children under fourteen off the streets at 6.00. No groups of more than three people on the streets after 9.00. They read it and did it.

Well, this is a long letter, but it is Sunday. I try to be quiet Sunday afternoons.

Here I am suffering for the comforts of life. I found my brother-in-law here, now General Brown. He had taken a house as his billet, retaining two old servants. So four of us are suffering terribly. It does not have steam heat, but lots of Dutch stoves that look like monuments, a bath room and our own food. Now, instead of an egg and chocolate as I had in France, I get coffee, bacon and cakes—a white man's breakfast.

At Coblenz in the Stadt theater there was something every night including Sunday with a matinee Wednesday and Sunday. A very good small orchestra and a very creditable opera every night, except two when they gave a play. One night I heard a wonderful symphony by the orchestra, or at least eleven of the solo instruments with piano. They gave Carmen and Boccacio, while I was there and several light German operas. The best seats were five marks. We get 5.35 francs for a dollar and 142.85 marks for a franc. So you see what the seats cost and the place only seats three hundred and fifty people. The house was crowded every night I went. The city helps out, during the war though the house only paid for light and heat and not that much this year.

WHEN WILL DAYTON WAKE UP? PUT PRIVATE AMBITION ASIDE AND WORK FOR THE MOST PEOPLE?

A FEW MORE 1919 DIPLOMAS

And a few more instructors

THE Institute is still graduating members of the class of 1919 as fast as they complete their work. The last group to be recommended for degrees by the faculty includes seven students: Charles J. Parsons of Brooklyn, N. Y., and W. H. Vogt in Mechanical Engineering; Miss Clara Poppic of Brookline in Chemistry; Edmund Adams of Concord, N. H., and Joseph E. Cannell of Everett in Electrical Engineering; and Joakim Lehmkuhl of Bergen, Norway, and Francis Anton Weiskittel of Baltimore in Engineering Administration.

A few additions to the instructing staff have been made by the Corporation: D. L. Webster to be assistant professor of Physics, Leon W. Parsons, William B. Ross and L. W. Fuller to be research associates in Applied Chemistry, and Lieut.-Col. Fred M. Green to be assistant professor of Military Science and Tactics, to assist Col. E. T. Cole.

A TECH MAN IN MEXICO

FROM a letter written to C. E. Locke, '96:

"Conditions in Mexico are bad in spite of newspaper talk to the contrary. In the large towns everything is quiet, most of the railroads operate with more or less regularity and you can do business in spite of the heavy taxes and government graft. Twenty miles away from a town or railroad you are up against it. The whole country is infested with bandits. Perhaps calling them bandits is quite too good a name for them, they are just a common variety of thieves. They are not organized, but are mostly bands of from five to fifteen armed peons that operate in the neighborhood of their home ranch or town. Whenever the government sends out troops to hunt them down, which is not often, they hide their arms and horses and are good peons until they see another chance to make a cleanup. This sort of thing makes any business requiring work out in camps away from the towns practically impossible."

RUSSIA AFTER THE ARMISTICE

Another letter from E. W. Bonta, '07, doing Y. M. C. A. work among the Bolsheviki

THANK GOD the war is over, and thank Him more particularly that Prussian militarism is crushed. And now you may be sure that most of my waking thoughts are fixed on getting back home. But how soon that time will be is very hard to say. There is much work for us to do here; it seems very useful, very helpful. There are few secretaries to do it. More secretaries are promised from America. I am very happy in my work here. Have what is to me an ideal layout. English-speaking troops to serve and a staff of Russians to work with, for which I am glad, because I am very fond of them. It is excellent practice in the language, too. I have to speak and hear Russian every day. Even in Moscow I was constantly with Americans or English-speaking Russians, so I am actually learning more Russian here than I did there. But English-speaking troops are more congenial to work with, because they understand what we are and what we are about. It was discouraging working among the returned prisoners in Moscow; they so often failed to grasp what we were and seemed unresponsive, many of them, poor souls. So many were "from the mind gone out," as the Russians say. Of course they couldn't understand. Others of them, particularly among the officers, understood very well and many times there were tears with their smiles when they thanked us.

Then, of course, I could not use the language and I was never sure that our Russian secretaries were painting us right. But the greatest damper on my enthusiasm in Moscow was the food situation. What the men needed was food, and food we could not get. It was hard giving out cigarettes made of hay, and letter paper and games when you saw them watching with hungry eyes for a measly bowl of soup and a dish of porridge.

Here, all is different, and I can throw myself into the work with enthusiasm. Another thing that made it hard for me in Moscow was the feeling that ours was a "paternal" sort of work. I really had looked forward to a world where there no longer would be one class that gave and another that received, but all would be "tovarishchi" together. That is what I thought we had found in Russia. But I have learned differently. That cry about condescension was nothing after all but the cry of the under dog and, when he got on top, was there equality? On the contrary, he was only too glad of the chance to do a little condescending himself.

His idea of getting equal was "getting even." I am afraid that happy state is the work of a generation more highly civilized than yours and mine.

I am sitting here writing in my room with three Russian boys about me. Every night it happens. They work hard and faithfully all day long and then at night drop in on me for orders for the following day. I give them instructions and return to my work. They stay on, so I think perhaps there is something else on their minds and ask them as tactfully as I know how in Russian. Tact is a difficult thing to use when you know only a few words of a language. They assure me there is nothing more, and still they stay. After working from 9 A.M. until 7 P.M., I expected they would be ready to go home, but if they wish to stay they must at least have something to smoke, so I pass cigarettes. Meantime, I am getting hungry and longing to ask

Pavel to get our supper ready. Finally, in desperation I send Pavel downstairs for the "kipitok" (boiling water) and we all have tea, biscuits and perhaps a little marmalade with it, if I have any and "bang, goes sixpence," as Tommy says it, for everything costs dear at present. It takes a Russian a long time to drink a glass of tea.

It's always poured into the glass boiling hot and then you let it stand in front of you for ten or fifteen minutes and treat it with absolute indifference, as if tea were the farthest from your thoughts. At last you calculate that it has cooled sufficiently to pick it up and you encompass the glass with both your hands, so warming the hands. It's a pleasant pursuit. Then you pick it up and holding it to the light admire the pale amber color. Russians always drink tea very weak and without milk. The glass is still piping hot and you are probably burning your hands. Set it down quick. Now grab the soft end of your ear with your burning finger. See how it takes the fire out of them. Take a lump of sugar and bite off a small chunk with your front teeth. This is "kusotchok"; if it was a big piece it would have been a "kusok"; but being a little piece it has to have a big name to make up. This kusotchok you tuck in your cheek and imbibe your tea through it. A pleasant sensation, that. There, they're getting up to go now. Now Pavel can go down and get our supper—baked beans, cocoa and stewed apricots. Then after that we will have a lesson in English. Some day, Pavel will be an English interpreter and earn better money than he is getting now. You wonder how fast the Russians pick up a strange language.

RAZING WAR-TIME STRUCTURES

The Institute is now beginning to dismantle some of the structures that were erected for war purposes. The buildings along Massachusetts Avenue, now the barracks of the Provost Guard, will not be disturbed, save that the headquarters may be moved to another site when the construction of the Pratt Memorial is begun, but towards Amherst Street, there have already been a number of removals. The gun pits have disappeared and also those structures of mystery in which gas experiments were formerly carried on. The rifle range along Vassar Street is already levelled and the engine sheds are soon to go. The band stand also, erected for the use of the musicians of the Naval Aviation Detachment, has been removed and will be set up on the Parkway.

THE A. U. U. TO BE PERMANENT

The American University Union in Paris is to be put on a permanent basis. The city of Paris has given a valuable site for a home for the Union and plans have already been drawn for a new and adequate building.

THREE TECH MEN HELPING RESTORE FRANCE

Monaghan, '01, Main, '71, and Professor Jackson

Major James F. Monaghan, '01, Ordnance Bureau, U. S. A., has been appointed an attache on the staff of Brig-Gen. McInstrey, under Col. F. M. House, on the Peace Commission in Paris.

At present he is a member of a board of investigation to determine the value of all the textile plants of France and Belgium destroyed by the Germans.

The other members of the board are Charles T. Main of Boston, Major D. C. Jackson, head of the Electrical Engineering Course at the Massachusetts Institute of Technology, and Major John Osborne of Boston.

Major James F. Monaghan has lived in Waltham for several years and is a well known architect and civil engineer. He was formerly connected with the 101st Engineers and later was made chief of the Civil Engineering Bureau for the supply division of his department. He received his early education in Lowell, and in 1897 was colonel of the Lowell High School Regiment.

He was graduated from Massachusetts Institute of Technology in 1901. In October, 1917, he was commissioned a captain and last June was promoted to the rank of major. He is a member of the American Society of Mechanical Engineers, Boston Society of Civil Engineers, New England Cotton Manufacturers' Association, Waltham Council, Knights of Columbus, and Waltham Lodge of Elks.

The work of Charles T. Main, '76, was commented upon in the January issue, in connection with Professor Swain's visit to France.

Major Dugald C. Jackson is an international authority on electricity and has been called abroad several times on civil matters in connection with public service corporations. With Mr. Main and others he went to France on December 5.

In 1911 he went to England to examine and appraise the entire telephone system of England. Professor Jackson, though less than fifty, has had a notable career in the engineering world. He was graduated from the Pennsylvania State College at the age of twenty and devoted two years to electrical engineering at Cornell University. St. Joseph, Mo., Omaha, Salt Lake City and other cities owe their present lighting plans to his work. He was a professor of the Massachusetts Institute of Technology and last May was commissioned a major in the Engineer Reserve Corps. Major Jackson was expert advisor of the Massachusetts Highway Commission and president of the American Institute of Electrical Engineers.

TO MOVE THE NATIONAL CAPITAL TO CHICAGO

That is the idea of two Tech Alumni. Yes, they live in Chicago!

George Bayard Jones, '05, and Thomas E. Tallmadge, '98, appeared recently before the engineers' subdivision of the Chicago Chambe. of Commerce, to present an idea, complete with maps and layouts for the city planning involved, whereby the national capital, to be named Lincoln, should be established on the lake shore north of Chicago. Mr. Tallmadge presented a very handsome and interesting plan for such a new city, to replace the architectural absurdities of Washington, as it is at present, and Mr. Jones presented the practical aspects of the problem.

Among the necessities for an enlarged national capital which will be commensurate with the United States' position as a leader among the world powers, Mr. Jones pointed to the following:

"The center of population has moved westward from a point a few miles north of Washington to a point in Indiana about two hundred miles southeast of Chicago," said Mr. Jones. "Washington, instead of being the center of the United States, as it was in 1789 at the time its location was decided on, is now situated on the eastern fringe of a country 3000 miles wide from east to west and 1200 miles long, and supporting a population of more than 100,000,000 people. It is located on the outskirts of the business life of the nation and has made very slow progress, as compared with many other cities."

It should be convenient of access to all parts of the country and hence should be located in the Middle West. Such location would insure safety and efficiency from a military standpoint.

It should have a background of resources based on agricultural wealth, coal, iron and other natural resources.

It should be near a transportation center, both rail and water.

Chicago fulfills all these demands. It is one of the great commercial centers of the world. It comes nearer feeding the world than any other one market point. It is capable of indefinite expansion, and it represents the new center of population, the Middle West.

He called attention to the report of the Public Buildings Committee, made in December, 1917, and published in 1918, in which it is stated that " the government's portion of the city of Washington is destined to be almost completely rebuilt." The report further pointed out the need even before the war for twenty-six buildings at a cost of approximately $48,000,000, which, with the cost of certain additional land, would bring the amount to $59,000,000.

There are precedents for moving the national capital, for it was first placed in New York, then Philadelphia and then Washington, and a proposal to move it to St. Louis in 1871 met with considerable favor, but died out after vigorous steps were taken to improve Washington.

The site proposed by Mr. Jones is the high ground on the lake shore a few miles north of Chicago. The proposal for the name of the new capital is Lincoln, in view of Lincoln's association with Illinois. The present government departmental buildings in Washington could be used as eastern administrative headquarters.

The new capital could be financed through a bond issue, enabling the government to control the buildings, direct growth, and benefit by the increase in value of land, an increase that would in time retire the bonds.

TECH MEN AT MUSCLE SHOALS

Alumni at the nitrate plant get together for a dinner

Theodore H. Skinner, '92, who acted successively in the capacity of field engineer, works engineer and finally director of construction, Air Nitrate Corporation, in the construction of United States Nitrate Plant No. 2, Muscle Shoals, Alabama, from March 12, 1918, until January 4, 1919, found a number of Tech men were connected with the work, and in December got as many of them together for a little dinner as could spare the time. It is thought that a memorandum of the class numerals and names might be of interest in the alumni record.

This job was the biggest single enterprise which the government undertook as a war industry, and it is very satisfactory to note that it was completed on time, and is turning out the work for which it was intended both in quantity and quality way in advance of the expectations of its designers and government experts who were consulted in the matter.

It is thought that there were a number of other Tech men at Muscle Shoals during the progress of the work, but they got away before this dinner was held. The abbreviations used after the men's names are the initial letters of the companies connected with the work: W. C. K. & Company, being Westinghouse, Church, Kerr & Company; A. N. C., Air Nitrate Corporation; J. G. W., J. G. White Engineering Corporation.

The men who attended the dinner at Executive Mess, December 6, 1918, were, by classes:

1892: Capt. Theodore H. Skinner, IV, construction engineer, construction director, Air Nitrates Corporation, Muscle Shoals, Ala.

1906: George W. Burpee, I, resident engineer, W. C. K. & Company; F. J. Van Hook, I, field engineer, W. C. K. & Company.

1908: Herbert W. Flaherty, I, assistant to construction engineer; C. W. Kennison, III, assistant superintendent Ammonia Gas Division, A. N. C.

1911: Capt. Daniel P. Gaillard, VI, Ordnance Department; Charles M. D'Autremont, expert mining engineer, Ordnance Department.

1912: C. A. Duyser, XI, assistant office engineer, W. C. K.

1913: Guy H. Buchanan, V, chief chemical engineer, A. N. C.; Ross D. Sampson, III, superintendent of Oven Department.

1914: Estes H. Magoon, XI, sanitary engineer, A. N. C.

1915: Lieut. William A. Houser, II, Ordnance Department; George H. Warfield, I, assistant office engineer, W. C. K.; Norman D. Doane, V, control chemist, A. N. C.

1916: George I Crowell, II, progress engineer, W. C. K.

1917: Yih Tze Chang, X, assistant chemical engineer, A. N. C.

1918: William M. B. Lord, XV, assistant to inspector of construction, Ordnance Department; David M. McFarland, X, Ordnance Department; Herbert B. Larner, VII, United States Public Health Service.

UNDERGRADUATE ACTIVITIES

HOMER V. HOWES

THE first period this year has been one of regeneration for student activity. Nearly every organization was either partly or entirely disbanded during the regime of the S. A. T. C. This state of affairs necessitated election of new officers.

The first event on the term's program was the election of class officers, which was held the Monday after the opening of the Institute. A record ballot was cast, and this fact indicated that the students, after their period of partial confinement, were glad to have an opportunity to take a part in Institute life besides their studies. The result of the elections was as follows: Class of 1920—John C. Nash, president; John J. Hines, vice-president; Merrill B. Know, secretary; Malcolm S. Burroughs, treasurer; Kenneth F. Akers and Frank L. Bradley, Institute Committee; D. J. Hennessey and Warren L. Cofren, Executive Committee. Class of 1921—William H. Young, president; L. W. Trowbridge, vice-president; John Worcester, secretary; W. R. Barker, treasurer; Garvin Bawden and Richard Spitz, Institute Committee; W. R. Barker and S. W. Conant, Executive Committee. Class of 1922—Sidney Bidell, president; Paul S. O'Brien, vice-president; Thomas E. Shepard, secretary; Ernest N. May, treasurer; F. G. Davidson and D. N. Dillon, Institute Committee; Warren T. Ferguson and Henry C. Gayley, Executive Committee.

Immediately the Institute Committee was organized, and started in its work of directing newly awakened activities.

The professional societies, in particular, have taken a new lease of life. The Mechanical Engineering Society elected H. O. Davidson chairman, and under his leadership the members have made several trips, one of which was to the Waltham Watch Company. The society has listened to several interesting talks, one on thermit welding and another by A. P. Durham on his experiences while in the French Tank Corps.

The Chemical Society, electing A. C. Atwater president, has held one big meeting, at which Professors Talbot and Lewis gave interesting talks on the subject of gas masks.

The Civil Engineering Society, with E. B. Murdough as president, has listened to two very interesting lectures; one by Professor Spofford on the "New Army Supply Base at South Boston"; and the other by Professor Swain, concerning his recent trip to France. The society also visited the supply base, and was conducted through the buildings by Professor Spofford and the engineer in charge of construction.

The Electrical Engineering Society has had a number of meetings. At one of these meetings, Professor Franklin gave a talk on "Mechanical Analogues of Electrical Phenomena," and N. H. Daniels, '96, gave a talk on "Labor Conditions." The members have made trips to the General Electric Company of Lynn, and the American Telephone Company.

Other lesser clubs and societies, such as the Rifle Club, Wireless Club, Cosmopolitan Club, have also organized and have held meetings.

There have been three important smokers during the term; two of these were given by the Tech Show. At the Kommers Smoker, January 10, the usual cheers, songs, with the famous Technology cider, doughnuts and smokes were in evidence. Parsons, Britton, Booth, and Akers of last year's show furnished the entertainment, while speakers from the different departments outlined the work of the show. The regular Tech Show Smoker, held February 14, was even more successful. J. G. Lee, '21, of Chicago, Ill., and Jesse Stam, '19, of New York City were announced the authors of this year's show.

The really big event of the year was the All-Technology Smoker, which was attended by over fifteen hundred students. The story of this smoker is, however, given a separate heading in the REVIEW.

The Musical Clubs, after giving a concert at the Franklin Square House, February 4, laid plans for the spring concert, which they gave March 7. Two hundred and fifty couples attended and the affair was a marked success.

Two dinners of note were scheduled during the term. The "Tech" invited all its past editors to make merry in the Walker Memorial, February 28, and meet their old associates. Among the alumni responding were Henry Horn, Harry W. Tyler, A. W. Walker, Harvey S. Chase, and H. E. Lobdell.

The Freshmen had their annual banquet five months late, March 14. The speakers were Dr. Maclaurin, Dean Burton, John Nash, president of the Junior Class; Sidney Bidell, president of the Freshman Class, and Edward Brickett. After the dinner, the Freshman made their annual march to Boston, pulling all trolleys and shouting at all policemen en route.

In athletics, Technology was very successful. The wrestling team won five out of seven meets, defeating such teams as Tufts and the Springfield Young Men's Christian Association Training School; while the Freshman wrestling team took the count of the Harvard Freshman. The swimming team met its first defeat in four years at the hands of Yale, after defeating such teams as Brown, Annapolis and Columbia earlier in the season. The track relay team defeated Dartmouth in the Boston Athletic Associations; while to cap the track season Garvin Bawden, '21, set a new record for Technology in the half mile in a trial test, covering the distance in 1 minute, 59 3-5 seconds.

Social events and dances have been too numerous to give in detail. However, the two dormitory dances, the naval unit dance and the Cosmopolitan Club dance are worthy of note. The Sophomores have already elected their Junior prom committee, which will consist of Akers, Cofren, Roman, Whitaker and Gee.

Technique has had its sign-up campaign, receiving fifteen hundred subscriptions. The Sophomores have elected their Technique Electoral Committee, which consists of the following men: W. Adams, P. N. Anderson, W. R. Barker, G. Bawden, E. W. Booth, H. C. Button, D. F. Carpenter, E. P. Clark, L. W. Conant, W. Dean, E. Edwards, Z. P. Giddens, Jr., I. D. Jakobson, H. P. Junod, F. B. Kittredge, W. G. Loesch, R. McKay, R. C. Poole, R. H. Smithwick, R. J. Spitz, D. E. Stagg, E. F. Stockwell, W. G. Waterman, Jr., R. P. Windisch, J. N. Worcester, W. H. Young and M. M Zoller.

THE TECH CELEBRATES AN ANNIVERSARY

Thirty-eight years of continuous publication—the new home—hopes for the future

THE annual dinner of the "Tech" held in the grill room of Walker Memorial, February 28, was an important event in more ways than one. First, it marked the moving into the new quarters at Walker Memorial, and secondly, it celebrated the thirty-eighth year of its existence as a successful Technology institution. Members of all the former boards were invited to attend, but many were unable to be there. The present board, and most of the staff attended. During the dinner, several of the former members of the "Tech" spoke about the paper as it had been in their day, and of the bright prospects for the future. Professor Tyler gave a short but interesting talk on the first board of directors.

An epoch-marking step in the development of the "Tech" since its first advent in Institute history thirty-eight years ago has been made by its moving into the new quarters in Walker Memorial. Students about Technology for many years have heard of the activities about their school in the columns of this publication, but there are few who realize how its growth and development have taken place. With new officers, better facilities and a bright future ahead, we feel that some enlightenment on the subject should be given.

About thirty-eight years ago, a meeting of the students at Technology was held for the purpose of considering the publication of a school paper. The "Tech" was not the first paper to be printed at the Institute. A year previous to the founding of the present paper, a publication called the "Spectrum" shone forth for a short time, but soon faded away. Still another attempt was made, but the results of this never reached the press.

At the preliminary meeting which resulted in the founding of the present paper, a committee of five was chosen to look into the matter carefully. The report of the investigation was in favor of the proposed paper. This committee also submitted a plan of administration. The management of the "Tech" was to consist of a board of seven directors representing the various classes. These directors were to have complete charge of the publication of the paper and were to elect an editorial board consisting of ten members. Not only were the directors responsible for this but also to their classes for the property and funds in their charge, and were to hold office until the election of a full succeeding board.

On Wednesday, November 16, 1881, the first issue of the "Tech" appeared. It seems only right, and in honor due, that a list of those first in charge of the news and what was destined to be so great an activity of Technology be printed here: Board of Directors, H. Ward Leonard, '83, president; Henry F. Ross, '82, secretary; I. W. Litchfield, '85, treasurer; Walter B. Snow, '82, and A. Stuart Pratt, '84.

The Board of Editors were: Arthur W. Walker, editor-in-chief; G. W. Mansfield, '82, George J. Foran, '83, F. F. Johnson, '84, Arthur D. Little, '85, Harvey S. Chase, '85, civil and mechanical engineering editor; Greenville T. Snelling, architectural editor; Charles H. Tompkin, Jr., mining and chemical editor; R. Tilden Gibbons, sporting editor; Samuel M. Munn, general advertising agent.

In the first issue were printed the aims of the new paper; the prime motive being to promote the interests of the students and in conclusion the writer went on to state that "even though the buds of genius do not bloom, even if the beauties of rhetoric and poetry are not developed, even if the paper becomes like the school it represents—only a field for plain, honest work—we shall be sure that we are stepping stones to further attainment."

The original idea was to publish the paper twice during the month; a copy appearing on alternate Wednesdays during the school year. The issue came forth in magazine form of fourteen pages. With the growth of the Institute, the "Tech" thrived and prospered, changing from a bi-monthly to a daily. The latter form, however, proved too much of a task for those on the board and a tri-weekly paper was issued appearing Mondays, Wednesdays and Fridays.

When the Institute moved across the river to its new home in Cambridge, the offices of the "Tech" were also moved from their former quarters in the Rogers Building to the basement of Building I. When the temporary activities rooms were opened at 75 Massachusetts Avenue, the "Tech" was given room there to carry on its work. With the advent of the entrance of the United States in the war, the feeling prevailed that little time should be given to activities. In accordance with the general trend of opinion, the publication of the "Tech" was cut down to two issues a week, one coming out on Wednesdays, the other on Saturdays.

As the war progressed, the "Tech" still strove on in the face of all difficulties and succeeded in attaining the distinction of being the only activity at the Institute carried on during the troubled days of the S. A. T. C. When, in February of this present year, the Walker Memorial was thrown open to the use of the activities at Technology, the "Tech" offices were moved to that building. Here these consist of a managing board office on the third floor and a news room in the basement.

In a few words the history of the "Tech" has been that of a struggle of an indifferent college paper in its cramped little offices in the Rogers Building on Boylston Street to a firmly established bi-weekly employing two stenographers, an office boy, and read by every true Technologian, be he an alumnus or an undergraduate.

THE BIGGEST DRY DOCK IN AMERICA

You've guessed it — a Tech man helped

Harrison S. Taft, '96, II, was one of the chief practical men on the job of building the new dry dock at the Hampton Roads Navy Yard in Virginia which has just been completed in the record time of two years since the first dirt was dug. The dock will be able to handle the largest ship afloat or even projected. Mr. Taft in charge of the concreting of the monster for the George Leary Construction Company, is receiving high praise for his work.

MISCELLANEOUS CLIPPINGS

An Expanding Technology

Massachusetts Institute of Technology is confronted with a housing problem. It has more students than ever before at this time of the year. Technology needs more buildings, according to the school authorities, to care for its constantly growing classes. A report just issued at Cambridge shows that so far as the Institute is concerned more young men are seeking technical education than in pre-war days, and that something must be done to furnish them with adequate school facilities. The Institute report on the subject says in part:

"There is the alternative of limiting registration or providing immediately for additions to the existing structures. One of these would be unfortunate, for reasons presently to be stated; the other demands a surplus in funds which the Institute does not possess.

As a result of the war, when most other colleges are bemoaning their diminished numbers, the Institute has within its walls today more regular students than it has ever had before at this time of year, and only a dozen less than the maximum registration at any time in the past. The precise number is 1944, and this, it is to be remembered, is in the absence of practically the whole of the senior class, which normally numbers about 300."

The report continues:

"A factor of the unwonted and unexpected registration has been the number of young men of the army or navy who have come after attending the special schools of aviation, mechanical engineering, and the S. A. T. C. The number of such men, whose lodging-places were the drafting rooms of the department of civil engineering or the halls of the Walker Memorial, has been thousands in all, and many of them were heard to say that when the war was over they would come to the Institute to continue the studies of which they had merely a taste. With every camp that demobilizes and every group of men that is mustered out, some come to the Institute to register. This is the reason why one hundred men have placed their names on the rolls during the past ten days, and why there are more coming.

Another reason is that more students are coming from foreign countries than ever before. For them the German technical schools are closed and others in Europe temporarily out of commission, so that they turn to the schools of the United States.

Then, again, there is the tremendous freshman class, which numbers 864, against a previous maximum of 524. It is, of course, common experience that there is great 'mortality' in the freshman class. It is natural, since this is generally a period when the methods of instruction change, when the bubble of any easy higher education is burst, but at Technology it has been found that men from other colleges enter the upper classes in numbers that quite make up for the loss in the first year.

Judging from past experience, the number of students next year will be 2500, and the figure 3000 is in plain sight. The question before the Institute is plainly, 'What is the Institute to do with them?'

Some will be found who will think that the existing buildings are quite large enough even for an increased number of young men. They are, however, not well informed about the space demands of modern technical education.

There are certain subjects, of course, where the professor lectures and the students jot down in unison their notes on it, where a thousand or two thousand might be cared for at once as is the audience at a Symphony concert or popular lecture. If the speaker illustrates his talk with experiments, the practical limit of a company that can come within the proper distance for observation is at the utmost maximum about five hundred. If it is a question of steam engine work, perhaps ten or a dozen can crowd about an instructor and see him take an indicator diagram, but if the students are young chemists or physicists or taking the courses in biology and public health, each must have his microscope or apparatus, his own sink, perhaps, and, at all events, his own desk and lockers. It is true, therefore, that with increase in students a technical school must have proportionate increase in laboratory space. Thus it is that the M. I. T. buildings, erected for 2000 students, will be crowded with 2500 and unable to care for 3000—numbers which are really in sight.—NEW YORK EVENING POST.

Germans and Science

In the flood of lamentable nonsense that has been let loose of late in the American press on the subject of German science and German scientific literature it is a joy to meet with the opinions of the few persons, here and there, who, though in no sense apologists of Germany, possess a first-hand knowledge of their subject and brains unbefogged by fanaticism. Such a person is Prof. Edwin Bidwell Wilson, of the Massachusetts Institute of Technology. Writing in "Science" on the subject of "Insidious Scientific Control," Professor Wilson hits the nail squarely on the head when he undertakes to point out just in what way the scientific literature of Germany is superior to that of other countries, and the direction in which the rest of the scientific world must bend its efforts if it would secure freedom from German intellectual shackles.

So far as the public at large is concerned, the issue has been deplorably confused by reiterated statements to the effect that Germany has never surpassed, or perhaps has never equaled, certain other countries in the task of adding to the world's stocks of valuable knowledge. In the field of creative science, we are told, German achievements have been grossly overrated. Let us grant this contention with alacrity. What then?

The policeman on his beat, the cab-driver on his box and the provincial politician on his stump may be pardoned for believing that a nation which is not prolific in scientists of the first rank is not capable of turning out particularly valuable scientific textbooks and reference books. Nobody who uses such books, however, should fall a prey to this fallacy. The best didactive scientific books are almost never written by the leaders in scientific thought and the pioneers in scientific investigation. They are written by persons who have a talent for exposition and unflagging industry in assembling knowledge wherever available, and who, as often as not, have never made a single scientific discovery.

Just how have German publications acquired their undeniable hold upon the minds of well-educated scientific workers throughout the world? It is idle to talk of propaganda. The modern business man is well aware of the narrow limitations of advertising that does not rest upon merit in the goods advertised; and propaganda is merely another name for advertising.

Professor Wilson has supplied a partial answer to the foregoing question. It is found in the everyday law of competition. He says:

"The fact is that any scientist must have the means himself readily to look up the literature on any scientific subject; and the fact is that the great compendiums of science, the great yearly reviews of scientific progress, are made by Germans and published in the German language. It is impossible for a mathematician to work to advantage without being able to consult the 'Jahrbuch fur Mathematik.' It is impossible for physicists to work without consulting the 'Fortschritte der Physik'; 'Science Abstracts' are not sufficient. And so it is in many other fields of science."

Every cosmopolitan scientific man will be able to make many additions to this list. The "Minerva Jahrbuch" is the one and only first-rate international directory of scientists and scholars. The "Geographen-Kalender" is indispensable within the field of geography and contiguous sciences. No British or French atlas approaches Stieler's in workmanship and accuracy. But the list is endless.

The business of making scientific discoveries is one thing; the business of recording them, summarizing them, rendering knowledge of them available, is quite another. In this latter field Germany has had no serious rival; and at the present writing no other nation manifests any serious intention of taking her place.

The workings of competition will not long be hampered by sentimental considerations. Unless non-Germans can produce as good dyes and drugs, textbooks and reference books as those made in Germany, we shall inevitably lapse into economic and intellectual subjection to the Germans. It will not help the situation to harp upon irrelevancies.

German monopolies have not been good for the world at large, nor, indeed, for Germany herself. Her commercial monopolies have been shattered by the war. Whether they can ever be re-established is problematical. The particular kinds of intellectual monopoly of which we are writing can only be said to be in abeyance. We hear that British and American manufacturers have solved the dye problem and the glass problem. We do not hear that any publisher has produced an American equivalent of Stieler's "Hand-Atlas" or a British equivalent of Winkelmann's "Handbuch."

Let us hope for the best. The English-speaking world is more populous than the German-speaking world, and the English language, with its Germanic base and its Latin superstructure, is particularly well qualified to become the international language of science. These are excellent reasons why books indispensable to students and scholars should be printed in English rather than in German.—SCIENTIFIC AMERICAN.

"Tech"—that's all

What the instructors and alumni of the Institute of Technology have done towards the winning of the war no one can reckon up; but everybody knows that next to moral heroism it was expert engineering on land and sea that brought the Allies victory. From the perfecting of gas masks to ship designing, from devising faster machinery for munition works to framing new formulas in the mechanics of flying, the demands of the war have drawn Tech men into skilled work for every division of the service. President Maclaurin himself has been in charge of the educational committee that cooperated with the war department in establishing and overseeing the S. A. T. C. And while officers and graduates by hundreds have thus been helping the nation, the Institute has not only quickened its regular work but has taken under its care half a dozen schools for the training of men and women for special war-time uses.

But now, as the Institution turns again to its normal duties for the community, it finds that its mid-year enrollment is embarrassingly large and that its prospective enrollment for the coming year is much heavier still. This surprising press of students has not resulted from any lowering of standards or " widening " of entrance requirements; on the contrary, young Americans are resorting to the Institute for the same reason that young men have been coming from Russia and China and Japan —because from this Massachusetts institution they can get instruction as severe and thorough as the tests which they must later face in practice.

This increase of students means a disproportionate increase of outlay, for on the average each student costs at least three times what he pays. And Garfield's definition of a college, as a log with a Mark Hopkins at one end and a student at the other, could never fit a school for the training of engineers and chemists. Modern equipment for the teaching of chemistry, say, and physics and the other sciences on which our industries must lean, costs far more nowadays than the public would suppose.

In this situation the Institute must appeal to its friends at large. Even if the Commonwealth keeps its faith, and construing its accepted promise as a " contract " within the meaning of the anti-aid amendment to the state constitution, makes the three remaining $100,000 payments on its ten-year subsidy, this aid has already been counted on and absorbed in the plans for the recent expansion in which the Commonwealth became, as it were, an interested partner. As for the " McKay millions," such co-operation with Harvard as was hoped for five years ago has been pronounced by the Supreme Court inconsistent with the terms of the trust.

If the public once understands how the Institute has not only helped win the war, but in years of peace has sent the name of Massachusetts through the Union and around the world more widely than the old clipper ships of Boston ever carried it, and how seriously the school needs money now to do its work as its work should be done, without overcrowding the laboratories or excluding worthy students, assistance will be generous and prompt.—BOSTON HERALD.

Tech as a Magnet

These are remarkable figures which the Massachusetts Institute of Technology has published concerning its present enrollment. In most of the American institutions of collegiate grade the attendance, at this early stage of the transition from war to peace, is only from one-half to two-thirds of the normal. With the disbandment of the S. A. T. C., the average American college has not yet had time to recruit a new undergraduate body of the size customary before the war. Not so at the great school of applied science in Cambridge! Not only has Technology retained more than the average share of its former S. A. T. C. enlistment, but also it has admitted a large influx of new candidates for degrees. The freshman class alone has eight hundred and sixty-four students, as against an attendance which never rose higher, in the years before the war, than five hundred and twenty-four. This excess is so large that it not only offsets the almost total absence of seniors from Technology's present enrollment, and also of its usual quota of graduate students, but actually raises the whole number to a slightly higher figure than it had reached in the years before the war. For the year 1915-1916 Massachusetts Institute of Technology had nineteen hundred students. Today it has nineteen hundred and eighty-six.

What is the explanation of so signal a popularity? Is it simply an index to the general movement of students into the technical schools which we have been taught to expect would be consequent upon the war, or is it a particular reflection of Technology's drawing power today, over and above the attraction exerted by other schools of the same kind? Probably it is both. The quest for scientific training has lately been much stimulated, and at the same time the name and fame of the Massachusetts Institute of Technology have gained new luster in the splendid plant that has been built on the Charles. If these combined attractions continue to swell the Institute's enrollment at the rate which has lately obtained, qualified persons estimate that it will soon show a student body of three thousand members.

Leaving out of account all broader questions raised by such an evidence of the modern trend toward technical training, it is possible to say that the prospect of an enrollment of three thousand students possesses some difficult questions even within the confines of Technology itself, for the authorities to think upon and determine. The type of education which the Institute has so successfully developed calls for great laboratories and for a far larger " space per student " than is customary in a cultural college. The fine buildings finished just before the war are already crowded and will soon be overcrowded. Some relief, it is true, will soon be secured by the erection of the Pratt School of Naval Architecture. It has been delayed by the war, but it will go forward promptly next spring. This, however, is but a slight contribution to the solution of the problem presented, because the space now set aside for students in naval architecture is not extensive. What is Technology to do? Arbitrarily to limit her numbers or still further to extend her buildings? Either alternative presents serious objections. The construction and maintenance of ever more and more buildings is a costly business in these days. Restrictions upon the total number of students are often detrimental in their effect. And still, difficult though the issue may seem, it appears impossible that an institution which is showing today such tremendous vitality can fail to find in the future paths and means of development that will lead not toward stagnation but toward ever greater and greater fruition. —Boston Transcript.

A WORLD'S FAIR AT M. I. T.

The long wanted project for a Boston exposition to celebrate the landing of the Pilgrims, abandoned reluctantly because of the war, has been revived again, with the idea of combining it with a world's fair in celebration of peace, to be held, perhaps, in 1922.

Among the many suggestions for a proper site for the exposition, the most favorably received seems to be the Cambridge side of the Charles River, near the new Technology. This would doubtless involve utilizing the Institute's buildings as an integral part of the exposition.

IN THE PUBLIC EYE

JOHN S. BLEECKER, '98, manager operating companies for Stone & Webster at Columbus, Ga., which include the Columbus Railroad, has been appointed general manager of the New Orleans Railway & Light Company by J. D. O'Keefe, receiver of that company. This is a new office with the company at New Orleans. All of the present departmental heads of the corporation will, it is announced, continue with the company, Mr. Bleecker assuming general charge of operation under Mr. O'Keefe. As at present organized, the company has separate managers for its railway and light departments. Mr. Bleecker has long been connected with Stone & Webster. He was born in Washington, D. C., on April 8, 1878, and was graduated from the Massachusetts Institute of Technology in 1898. He was employed in the mechanical department of the American Bell Telephone Company at Boston immediately after graduation and remained with that company until 1900, when he entered the service of the Stone & Webster Engineering Corporation. In the interests of this large holding system he has filled various positions at Boston, Seattle, Houghton, Blue Hill, Paducah and Columbus, the duties covering a very wide range of activity.

WILLIAM RAWSON COLLIER, '00, sales manager of the Georgia Railway and Power Company, Atlanta, Ga., has been appointed operating manager of the electrical department of the company in addition to his duties as sales manager. Upon graduation from the Massachusetts Institute of Technology, Collier entered the consulting engineering field as junior member of the firm of Collier & Browne. In 1902 he entered the service of the Georgia Railway and Power Company in charge of the drafting department. Four years later he was appointed contract agent, resigning in 1907 to become manager of the Electric Manufacturing and Equipment Company. Upon the dissolution of this company he became associated with the B-R Electric Company as engineer, which position he held until the formation of the present Georgia Railway and Power Company, when he was appointed sales manager. In addition he became sales manager of the Atlanta Gas Light Company, manager of the Carrollton Electric Company and manager of the Suburban Gas and Electric Company, holding these two latter positions until the companies were merged with the parent organization.

WINTHROP COFFIN, '90, of Brookline, member of the banking firm of Coffin & Burr, has been appointed by Governor Coolidge as the successor to Galen L. Stone, who resigned several days ago as a trustee of the Boston Elevated Railway.

Mr. Coffin is a graduate of Technology, a director of the United Electric Securities Company, Greenfield Electric Light and Power Company, Fitchburg Gas and Electric Light Company, and the Boulevard Trust Company.

It was a Boston man, HENRY HOWARD, '89, who, more than a year and a half ago, foresaw the absolute and immediate necessity of providing a complete recruiting service for the new United States merchant marine, which then was in the very first stages of its inception. It would be useless, Howard saw, to try and build a great armada of cargo ships and transports without making definite provision for the securing and for the proper training of men who could be qualified to operate them from the very moment that they were accepted from the hands of the shipbuilders.

In the half-century decline of the American merchant marine there had been even more than a proportionate decline in American sailormen. Of course, there would be a sizable quantity of men to be secured from the land, who at some earlier time in their lives had had a sufficient sea experience to make them at once fit officers or sailors, or with a minimum of training. The extensive cargo fleets of the Great Lakes—idle for fully five months of the year—might also be drawn upon. But these two sources, taken together, could hardly be counted upon to furnish more than from a fifth to a quarter of the necessary seamen for such a fleet as the United States Shipping Board had in mind almost from the very beginning in January, 1917.

So it was that the trained executive mind of Henry Howard of Boston set about to devise a definite plan for meeting this particular great need of man power. His study of the problem was rendered much easier by the fact that with him the love of the sea is inborn. It is his recreation and his hobby.

At the end of May, 1917, Mr. Hurley, who then had come to be chairman of the United States Shipping Board, quickly accepted Mr. Howard's plan to enroll and train sailors and officers for the new merchant marine, appointed him director of the Recruiting Service and gave him headquarters in the tall new tower of the Custom House in Boston. Within twenty-four hours after his appointment Howard was hard at work on the job, drafting his organization personnel and preparing to open the first of the engineering and navigation schools. And because of the fact that he had spent so much study on his plan even before taking it down to Washington he was enabled to work with great rapidity.

Before the summer of 1917 was anywhere near over he was graduating from his schools and training stations students who already were being given a short apprentice training on coastal and South American routes before being given full jobs and full responsibilities upon our growing roster of merchant ships.—Edward Hungerford in "Collier's Weekly."

MARSHALL O. LEIGHTON, '96, consulting engineer of Washington, D. C., has been chosen as chairman of the newly formed national service committee of the Engineering Council. Mr. Leighton, who has made a particular study of the hydroelectric development of this country, was one of those who testified before the congressional committee on the possible commercial development of navigable rivers and streams in forest preserves, indicating also to what extent canalization of navigable streams would result in improvements to navigation, as well as in water-power possibilities. He has made a study of the application of water power to many uses, including industry, central stations, electrochemistry, and especially railroad electrification. Mr. Leighton was born in 1874. He was graduated from the Massachusetts Institute of Technology in 1896. He engaged chiefly in hydraulic work and in 1906 was appointed chief hydrographer of the Geological Survey. He continued in this work until 1913, when he took up consulting work. He has been a member of a number of government commissions to study waterways and hydraulic possibilities.

FREDERICK P. ROYCE, '90, has been appointed general manager for the receiver of the Brooklyn Rapid Transit Company.

He had acted in a managerial capacity in connection with several railroads, none of them hereabouts. He felt because of the court relationship to the B. R. T.

unwilling to discuss that part of his career until he learned how much more Judge Garrison intended announcing.

Royce was graduated from the Institute of Technology in 1890. He is vice-president of the Stone & Webster Management Association and a director of the American Pneumatic Service Company, Lamson Consolidated Store Service Company, Boston Woven Hose and Rubber Company, Concord (Mass.) Electric Company, Paducah Traction and Light Company, Houghton County Electric Light Company, Blackstone Valley Gas and Electric Company, Haverhill Gas Light Company, Fall River Gas Works Company, Connecticut River Power Company. He is a member of the American Academy of Political and Social Science.

PROFESSOR GEORGE E. RUSSELL, '00, of the department of Civil Engineering, is to be president and general superintendent of the Junior Plattsburg Camp. This institution was established during the war to furnish a military training to young men of an age below the limit that would insure their admission to Plattsburg. With the cessation of the war there was no longer need for such a camp in its military sphere of usefulness, which might perhaps be termed a feeder to Plattsburg, so its projectors have made of it a great military summer camp, with its drill supplemented by regular studies. In this there will be introduced engineering features, and in seeking a director the choice fell on Professor Russell, who is already hard at work on the plans for next season's work.

Professor Russell is a Boston boy, a graduate of Technology in the class of 1900, and for eighteen years engaged in the teaching of engineering. After a brief experience as instructor at Technology immediately on graduation, his next position was that of structural engineer and designer in the steel car plant of the American Car and Foundry Co. of Detroit. Shortly afterwards he was called to Cornell to the Civil Engineering College and after a year, he returned to the instructing force of the Institute, where he has enjoyed successive promotions till for the past few years he has been Associate Professor of Hydraulic Engineering and Director of the Hydraulic Laboratories. The splendid layout in hydraulics at the Institute, without its peer in the world, was his work. As a consulting engineer Professor Russell has been constantly in demand in the lines of his profession and at different times he has been associated with state and municipal commissions.

Another experience in connection with the Institute fits Professor Russell especially well for his new summer work, for at the Institute summer Civil Engineering camp at East Machias, Me., he has for a number of years been resident manager. On every side, therefore, as teacher as well as camp director, he is especially well fitted for the management of the Junior Plattsburg, while, hailing from Technology, there will be no question as to the quality of instruction that will be given under his direction. He will be no stranger to his new duties for, setting aside his experience as commandant of the camp at East Machias, he has a record of eleven years' connection with military organizations of the state of Massachusetts in various capacities. He has had, furthermore, an inside view of the problem attending the education of young men and boys through an intimate acquaintance with the work of the Home and School Association of Boston, of which he was for three years a local president.

Professor Russell will retain his connections with the Institute, but is relinquishing his outside professional engagement in consultations for this educational work, the activities of which will be largely in the summer season.

MAJOR CARROLL H. SHAW, '10, Engineers, U. S. A., who was the officer in charge of the New England district of the power section of the War Industries

Board, is now engaged in the preparation of a report on the power requirements and resources of New England as a unit, which is to be submitted to the War Department to furnish a basis for any future conservation that may be required. He was born at Abington, Mass., and was graduated in 1910 in the electrical engineering course from the Massachusetts Institute of Technology. His professional experience began in the Engineering Department of the National Electric Lamp Association at Cleveland, Ohio, where he was employed for about four years. In this organization he was occupied largely with engineering associated with the commercial phases of industrial illumination and street lighting, with extensive field work in the Middle West and the East. In October, 1914, he was appointed electrical engineer of the Sheboygan (Wis.) Railway and Electric Company, now the Eastern Wisconsin Electric Company. This post also covered operating service as superintendent of light and power, in charge of overhead distribution and station electrical engineering. In April, 1917, he became engineer and soon after manager of the Minnesota Utilities Company, Eveleth, Minn., operating in the Mesaba Iron Range district. Major Shaw in June, 1917, received a commission as captain in the Engineer Reserve Corps, later being ordered to report for instruction at Camp Lee, Petersburg, Va. In February, 1918, he was ordered to Washington and was detailed by the Chief of Engineers to duty with the power section of the War Industries Board, with headquarters at Washington. Since then Major Shaw has traveled more than 25,000 miles in the Central, North Central and New England States in power-conservation service, performing special work in power utilization at Cleveland, Ohio, Harrisburg, York, York Haven and Erie, Pa., and Utica, N. Y. On August 20, 1918, he was ordered to Boston as officer in charge of this work in the New England district. He was commissioned major of engineers in October, 1918.

A new corporation, probably bearing the title of the International General Electric Company, will be formed as a subsidiary of the General Electric Company to develop foreign trade. GERARD SWOPE, '95, has resigned as vice-president of the Western Electric Company to become the president of the new organization.

Swope, who is announced as the president of the new company, was graduated from the Massachusetts Institute of Technology in 1895 and in the same year entered the employ of the Western Electric Company at Chicago. After spending a year in various departments of the shops he became designing engineer in the power apparatus engineering department. In January, 1901, he organized the St. Louis branch and was its first manager. He was transferred to Chicago in 1906 as power apparatus manager. Two years later he was made general sales manager with headquarters in New York. He was elected vice-president in 1913.

COLONEL WILLIAM H. WALKER.—The great war enlisted the services of almost every branch of science, and many a technical expert found himself called from a life of study or teaching to a place in the cohorts of Mars. One such man, to whom there fell work of special interest and importance, was William H. Walker, professor of chemical engineering at the Massachusetts Institute of Technology, later colonel in the United States army, and chief official manufacturer of lethal gases.

Colonel Walker was one of the first recruits to the board of chemists commissioned by the government to deal with the problems rising out of the introduction of poison gas in warfare. It was soon found that the only effective method of handling the situation was to produce sufficient quantities of the deadly stuff to make it possible for the Allies to outdo the German in his own specialty. Prior to this war poison gases had never been manufactured in bulk. The task had been a new one, even to Germany.

England and France had already begun the manufacture of phosgen and mustard gas, and had produced them on a scale comparable with that of the enemy. The American problem was to bring to bear our unique facilities for quantity production, and by so doing to set a new standard in gas warfare. It was decided that an arsenal should be built and devoted exclusively to this purpose. Since it was desirable to keep the scheme secret as far as possible, an isolated region in Maryland, bordering on the Atlantic, was selected, and there, in the early months of 1918, were set up the various units of a great industrial establishment which was to produce such quantities of man-killing poisons as the world had never dreamed of.

Scientific men knew the theories for producing these poisonous gases—knew how it had been done in the laboratory; but their manufacture in hundreds and thousands of tons, and the handling of these great quantities after being manufactured, involved entirely new problems. In building such a plant it became necessary that the reaction in a test-tube should be reproduced on the scale of an industry occupying scores of buildings and scattered over hundreds of acres of ground. The men of science, with their formulas carefully worked out, called in the most experienced and best-proved executives that the nation could furnish, and set them to making theory into reality.

So did a plant come into being which, at the signing of the armistice, was producing more poison gas than all of the rest of the world combined.

Few people probably appreciate the fact that the principal basis of the new terror that has been added to warfare is nothing more than everyday table salt. Table salt, in science, is sodium chlorid, and the first process in the manufacture of practically all the poisonous gases is to separate the chlorin from the sodium. The greatest of the units at Edgewood Arsenal is the chlorin plant. Water is saturated with salt, and electricity is sent through the brine solution at a high voltage. The chlorin is freed and carried away in pipes, as a gas; the sodium is salvaged in solid form and made available for industrial use.

The chlorin so secured is the identical yellowish-green gas which the Germans first unleashed at Ypres in April, 1915, and which rolled down upon the French Colonials and the Canadians, taking a heavy toll of lives. With a little scientific juggling it became the still more deadly phosgen of the later attacks, and it is one of the chief elements entering into the manufacture of mustard gas, the most dangerous of them all.

When the armistice came, America was prepared to dominate the military situation in so far as it depended on the use of gas. By spring we should have been turning out ten times as much phosgen and mustard gas as Germany could produce, and should have been prepared to deluge the enemy with a veritable avalanche of destruction. Colonel Walker, who in rare degree combines scientific erudition with executive ability, had performed one of the most remarkable tasks of the war.—MUNSEY'S MAGAZINE.

NEWS OF ALUMNI ASSOCIATIONS

CHARLESTON—TECHNOLOGY CLUB OF WEST VIRGINIA.—Meetings have been held on the third Saturday of every month since our organization last May.

The September meeting took the form of an outing on the Kanawha River. Supper was cooked (Mayo Tolman, '13, chief cook) and then wood was added to the fire until it was a real fire. The fifteen of us present sat until a late hour talking and thinking of Tech. Finally we journeyed back the four miles down the Kanawha under a full moon. At this meeting, Mrs. Mayo Tolman (Ruth Dunbar) '11, was made an honorary member.

The February meeting was made "ladies' night." Twenty-six were present at the Edgewood Country Club for dinner, after which, Mayo Tolman, '13, member of the American Red Cross Relief Commission to Guatemala after the earthquake, gave a talk on "The American Red Cross in Guatemala," illustrated by many remarkable photographic slides and a full reel of motion pictures. The talk, from the very nature of it and the speaker's first-hand experience, was bound to be good, but with these was coupled Mr. Tolman's unique ability to intersperse stories of odd events he had witnessed and stories of native life in Guatemala, told in his own inimitable manner.

We urge all Tech men in West Virginia to get in touch with the secretary, and get on our list for notices of meetings. The dinners and meetings are now held at the Edgewood Country Club instead of the Hotel Kanawha, the third Saturday in each month at 7.30 P.M. The annual meeting and dinner will be in May and we would like to have every Tech man in the state present.—JAMES B. PIERCE, JR., '11, Secretary, Box 932, Charleston, W. Va.

CINCINNATI M.I.T. CLUB.—At the annual meeting of the Cincinnati M.I.T. Club, held January 25, 1919, the following officers were elected for the ensuing year: President, Rudolph Tietig, '98; vice-president, Nathan Ransohoff, '10; secretary, John M. Hargrave, '12, care Cincinnati Tool Co., Cincinnati, Ohio; treasurer, David Davis, '97; directors, C. R. Bragdon, '07, W. C. Folsom, '08, F. W. Morrill, '07. The meeting brought some thirty-five alumni together from this vicinity. The annual bowling tournament held after our dinner and business meeting showed that notwithstanding the strain of the past year and the approach of prohibition, our star bowlers are still able to keep the pin boys busy. Kruckemeyer, '11, had a winning team, averaging six hundred for six men, but Rapp, '00, and Tietig, '98, were close behind. It is strange that architects make such good bowlers. Folsom, '08, who runs our local health department, was the most consistent man, scoring one hundred and forty game after game until the lights were turned off. If any of the nearby Alumni Associations want a run for their money, we will be glad to take them on.

Lieut. E. R. Jackson, '10, Ordnance Department, who wants to be known as "Doc," was transferred last fall from this district to Dayton, Ohio. We are glad to learn that his work there has been finished and he will soon return to this district.

C. R. Woodward, '12, stopped in to lunch with us recently. He is on an inspecting tour for the Factory Mutual Insurance Company of New York. It is not quite certain what he is inspecting.

Lieut. Charles F. Cellarius, A. E. F., '16, our local ex-secretary who was until recently with a machine gun company, has been transferred to the Fine Arts Department of the Army Educational Commission, working under the Young Men's Christian Association in Paris. This, he says, is a sort of army university which is to use some of the spare time which the overseas men now have on their hands. He is fortunate in the change as it will give him an opportunity to continue his study in architecture.

H. D. Loring, '06, who is with the Ferro Concrete Construction Company, recently addressed a meeting of constructing engineers in Rochester, N. Y., on salesmanship. He had just landed an order for a large building for the Eastman Company.

A. H. Pugh, Jr., '97, who has been handling the gas and chemical affairs of the Local District Ordnance Office, has returned to his peace-time proposition of printing seven-color jobs and railroad tickets.

Sergt. Charles R. Strong, '11, at last report was still in England, directing sheds and barracks with the Air Construction Division. He expects to return soon, however, to build houses with his former partner, E. H. Kruckemeyer, '11.

The Cincinnati M. I. T. Club is still holding Tuesday luncheons at Schuler's, 626 Vine Street, at 12.30 P.M. If you are in Cincinnati at that time, we will all be glad to have you join us there.—JOHN M. HARGRAVE, '12, Secretary, care The Cincinnati Tool Company, Cincinnati, Ohio.

DETROIT TECHNOLOGY ASSOCIATION.—Referring to your circular letter of March 1, in regard to news items for the REVIEW, the affairs of the Detroit Technology Association have been rather quiet during the year 1918, on account of many active members of our Association being in war work.

R. Floyd, '15, has been lieutenant in air service as a flying instructor in Texas. He is now back with his father, F. H. Floyd Oil Company, Detroit.

Marion Gorham, '93, who has been inspector in air craft production, has now moved to Buffalo, where he is permanently located in business.

William A. Houser, '15, is back again from the army and is with the Cadillac Motor Company.

William R. Kales, '93, is captain in air service, 4th Air Park of 3d Army in Coblenz, Germany. He is having all sorts of experiences from flying to chasing cooties and acting as judge of court martial. He is having a great time looking up the history of the country. He has lost a great deal in weight, but is well and happy.

E. B. Snow, Jr., '05, Lieutenant Signal Corps, has had charge of inspection of Liberty motor production at the Lincoln Motor Company plant.

A. F. Shattuck, '91, formerly chief chemist of Solvay Plant here, has had to move to California for his health.

Granger Whitney, '87, has been in charge of coke prices in fuel administration at Washington. He has returned and will later go to his farm at Williamsburg, Mich.

H. T. Winchester, '03, is still at Hog Island Shipyard.

Allen Loomis, '99, is still in Dayton, Ohio, with Air Service.

Harold W. Barker, '14, left here as lieutenant in Engineering Corps.

P. C. Baker, '16, is lieutenant in Aero Squadron, A. E. F.

R. F. Hill, '10, is lieutenant of ordnance, Rochester, N. Y. We are sorry to learn that Roger's wife died this last year.

O. W. Albee, '93, is Colonel Albee now, in charge of Ordnance Department, U. S. A., in Canada, with headquarters at Toronto. He has had a real big job for some time, having had twenty-five hundred inspectors.

George R. Anthony, '98, is just out after an operation for appendicitis.

Maurice Black, '96, died this winter.

George R. Cooke, '07, is real busy now with large jobs, among them the 3d Street sewer in Detroit.

Oliver M. Davis, '01, is with Whitehead & Kales Iron Works, Detroit.

E. M. Elliott, '06, is with the Diamond Power Specialty Company.

J. R. Marvin, '02, has moved to New York.

H. O. Page, '06, died December 1, 1918. I have not learned any of the particulars.

Waldeman S. Richmond, '05, of United States Engineers' Office, is transferred to Buffalo.

The regular monthly luncheon was held at the Board of Commerce, March 5, at 12.30 o'clock. We were pleased to have Lieut. W. H. Leathers, O. D., U. S. A., '14, with us at the luncheon.

Mr. Walter O. Adams joined us for the first time. Adams now has office at No. 1038 Dime Bank Building.

Granger Whitney, '87, spoke to us on his experiences in fuel administration.

The annual meeting of the Detroit Association was held at the University Club, March 12, at 6.30 P.M. Dinner. President D. V. Williamson, '10. Mr. Horace Esselstyn, Commissioner of Public Works, Detroit, talked to us on the Hog Island Shipyard. Esselstyn was resident engineer at this yard during 1918 and gave a great talk, defending the yard and its builders. A photograph twelve feet long was shown to illustrate the talk.

The secretary read a letter from William R. Kales, '92, captain in Air Service, Army of Occupation, Coblenz, Germany. Lieut. F. H. Floyd, '15, Air Service, then talked about his experiences as flying instructor at the Texas flying field. "Slim" says that flying is just as safe as walking and a lot quicker.

Officers elected for 1919 are: President, George D. Huntington, '98; vice-president, Frank H. Davis, '04; treasurer, M. S Dennett, '11; secretary, Joseph N. French, '11, 2098 Woodward Avenue, Detroit, Mich.

There were thirty-one present at the dinner: H. S. Esselstyn, Harmon Wendell, '91; Kenneth Greenleaf, '11; W. A. Houser, '15; Frank H. Davis, '04; George Huntington; L. E. Williams, '02; George V. Pottle, '01; Frank R. Cooke, '96; J. W. French, '11; George Anthony, '98; Colonel Gibbons, U. S. A.; M. S. Dennett, '11; D. V. Williamson, '10; R. Floyd, '15; E. B. Cooper, '05; H. W. Brown; H. Day; George R. Cooke, '07; Charles T. Hammond, '91; E. A. McGonigle, '96; G. W. Carpenter, '00; Fred Sutter, '93; C. Lang, '04; Howard Currier, '13; Walter O. Adams; Granger Whitney; O. M. Davis, '01; D. H. Mayo, '14; Lewis Davis, '12; Charles T. Fuller, '12.—FRANK H. DAVIS, '04, Vice-President.

MANCHESTER—THE TECHNOLOGY CLUB OF NEW HAMPSHIRE held its annual meeting February 28 in the club rooms of the W. H. McElwain Company's Plant at Manchester, N. H., where a very pleasing banquet was served in accordance with the McElwains' efficiency methods. After the dinner the annual election of officers was held and those chosen for the following year were:

President, E. W. Rollins, '71, of Dover, N. H.; vice-president, Norwin S. Bean, '94, of Manchester, N. H.; secretary and treasurer and representative of the Alumni Council, Walter D. Davol, '06, of Manchester, N. H.

A motion for a vote of thanks to President E. W. Rollins for the glorious entertainment given the Club last summer and for his invitation to again be with him next summer was introduced by John Chase, '74, of Derry, N. H., seconded by Harold A. Smith, '08, of Manchester, N. H., and passed on unanimously.

Later we were addressed by Lieut. Leigh S. Hall, '14, of Concord, N. H., on his experience in the Construction Department of the United States Naval Aviation Service and by Clarence D. Hanscom, '17, on "Aeronautical Development."

NEW BEDFORD—THE TECHNOLOGY CLUB OF NEW BEDFORD.—The club gathered at the Wamsutta Club at dinner on Thursday night, March 13, to hear Van Rensselaer Lansingh tell of his experiences at the University Union and at the front in France. Twenty members enjoyed a pleasant evening listening to Lansingh's genial talk.—CHARLES F. WING, JR., Secretary, '98, 36 Purchase Street, New Bedford, Mass.

NEW HAVEN—NEW HAVEN COUNTY TECHNOLOGY CLUB.—A general get-together meeting was held at the New Haven Lawn Club on Saturday evening, January 18. Thirty-eight men were present for dinner. President C. E.-A. Winslow announced that the annual banquet would be held on Saturday, March 29, and that he had been fortunate in securing Dr. Dewey and Mr. Lansingh to speak about their war work. After dinner teams were formed and a fast and spirited bowling contest was marshalled by Herbert Wilcox as master of ceremonies. Quite a number of men came from Waterbury and several from near-by towns of Derby, Naugatuck and Cheshire.

The following men were present: C. E.-A. Winslow, E. W. Rutherford, Alden Merrill, John Tetlow, Lawrence Wetmore, W. H. Whitcomb, E. A. Teeson, E. O. Upham, E. W. Taft, H. A. Morrison, H. G. Shaw, W. T. Dorrance, Charles W. Brown, C. T. Dunn, B. H. Aldridge, Fred W. Lane, Lucius Bigelow, R. L. Parsell, George Nichols, C. D. Dunlap, J. C. Bradley, H. L. Morgan, I. M. Guilford, I. S. Gravely, F. H. Pierce, Edwin Pugsley, F. G. Smith, T. C. Merriman, W. H. Bassett, Kenneth Cartwright, C. F. Suhr, J. R. Putnam, L. H. Marshall, F. P. O'Hara, A. T. Hopkins, H. M. Wilcox.—ROY L. PARSELL, Secretary, New Haven County Technology Club.

NIAGARA FALLS TECHNOLOGY CLUB—A meeting was held on March 14, at the Niagara Club, and sixteen members were present. After the feed was over, a list was passed and all recorded their bowling ability. Four teams were made up from that data. The Arlingtons—Messrs. H. L. Noyes, F. H. Dunnington, W. N. Flanders and R. E. Gegenheimer. The Beacons—Messrs. P. E. Blood, R. H. White, E. H. Mangan and H. V. Atwell. The Commonwealths—Messrs. E. T. Pollard, A. P. Sullivan, P. G. Savage and E. L. Hauman. The Dovers—Messrs. Paul Hooker, J. H. Critchett, W. C. Read and N. Duffett.

Fines were imposed on any man bowling out of his class as indicated by previously recorded ability.

The Dovers were winners of first money, with score 1405, Arlingtons second with 1321, Commonwealths 1304 and Beacons 1243.

The singing was led by President Pollard. Plans were discussed for a dance to be held in the near future.—N. DUFFETT, '11, Secretary, care Union Carbide Company, Niagara Falls, N. Y.

PHILADELPHIA—TECHNOLOGY CLUB OF PHILADELPHIA.—I enclose a list of the new officers of the Technology Club of Philadelphia, elected at the annual meeting on April 2, 1919: President, Percy E. Tillson, '06; vice-president, C. J. Walton, '14; secretary, M. B. Dalton, '15, Liberty Mutual Insurance Co., 22 South 15th Street, Philadelphia, Pa.; assistant secretary, F. R. Foster, '15; Executive Committee, officers ex-officio, C. E. Patch, '02, C. D. Davis, '12, E. P. Trask, '99, C. A. Anderson, '05, D. K. Bullens, '09.

I also enclose a list of the meetings which have been held during the past year:

May 1, 1918, subject, Hog Island, Mr. C. C. Allen and Mr. H. W. Osgood, speakers.

June 8, 1918, 11th Annual Field Day at Woodbury Country Club.

October 2, 1918, subject, Accident Prevention, Mr. M. B. Dalton, '15, speaker.

November 6, 1918, subject, Technology Men in the Naval Aircraft Factory, Commander F. G. Coburn, United States navy, speaker.

December 4, 1918, subject, The Storage Battery in War and Peace, Mr. J. Lester Woodbridge, speaker.

January 7, 1919, subject, The Design of Artillery Ammunition, Mr. J. W. Taylor, '05, speaker.

February 5, 1919, subject, Ship Design, Mr. E. P. Trask, '99, speaker.

March 5, 1919, subject, Heat Treatment of Steel for Ordnance Work, Mr. D. K. Bullens, '08, speaker.

April 2, 1919, subject, Photo-Engraving, Mr. Charles A. Stinson, speaker.

The next meeting will be on May 7, 1919, and Dr. Hollis Godfrey, '98, president of the Drexel Institute, Philadelphia, will be the speaker. The annual field day will be held on Saturday, June 7, 1919, at the Woodbury (New Jersey) Country Club.—M. B. Dalton, '15, Secretary, 22 South 15th Street, Philadelphia, Pennsylvania.

ROCHESTER—THE TECHNOLOGY CLUB OF ROCHESTER—On December 11, the Club held its annual dinner and business meeting at the Rochester Club. As this date happened to be Frank Lovejoy's birthday, some of the fellows thought it would be good fun to pull a little surprise stunt. So after the regular dinner was over, the lights were turned out and a large, healthy looking birthday cake, brilliantly aglow with the proper number of candles, was ushered in and placed before Lovejoy, much to his amazement. During the hubbub of exclamations and yells of "Speech!" "Speech!" which followed, paper caps such as some of our "kiddies" have at festive affairs of this kind were passed around and were promptly donned by the usually staid and dignified "bunch." President Lomb then called upon Clarence Culver to make a few remarks fitting the happy occasion, whereupon Clarence produced an epic of his own composition, which he proceeded to read, much to the delight and amusement of every one.

After some further speechifying and rousing songs, we settled down to the business meeting, which was followed by a bowling contest on the Club alleys between the 'Pluggers' and the 'Sharks.' All of the 1918 officers were re-elected for the coming year and Clarence Culver was elected to act on the executive committee for three years in place of F. W. Lovejoy, whose term of office expired at this time.

Those present were: H. E. Akerly, '10; J. F. Ancona, '03; O. E. Conklin, '14; C. C. Culver, '96; J. C. Dryer, '99; B. W. Dow, '09; M. H. Eisenhart, '07; C. K. Flint, '01; J. H. Haste, '96; F. L. Higgins, '04; R. B. Jeffers, '09; V. E. Lacy, '01; Adolph Lomb, '92; F. W. Lovejoy, '94; F. B. Saegmuller, '04; H. O. Stewart, '09; A. A. Packard, '98; V. M. Palmer, '03; C. F. Wray, '95; Gerould Lane, '13; O. K. Foote, '80.

The members of the Club are very glad to welcome back to the city and to the Club J. Howard Cather, '12, who has recently been released from Service. At the time of discharge, he was serving as first lieutenant in the Engineers Corps, being assigned to Company C, 78th Engineers, at Camp Leach, District of Columbia.—V. M. Palmer, '03, Secretary, Eastman Kodak Company, Kodak Park Works, Rochester, New York.

SYRACUSE—M. I. T. CLUB OF CENTRAL NEW YORK.—Our regular monthly meeting of the M. I. T. Club of Central New York was held on the evening of January 16 at the University Club. Fifteen members were present.

Mr. W. E. Hopton, '92, purchasing agent of the Solvay Process Company, gave us a very interesting talk on the organization of this department.—J. S. BARNES, '08, Secretary, Merrell-Soule Company, Syracuse, N. Y.

NEW MEMBERS OF THE ALUMNI ASSOCIATION

The following were elected members of the Association by ballot:

Arthur John Eveland, '01
Frank Hollis Appleton, '18
Malcolm Johns Baber, '18
Arthur Henry Barnes, '18
Alexander Short Butler, '18
Arthur Godfrey Carlson, '18
Edward Sterling Carter, '18
Enslo Smith Dixon, '18
William Chapman Foster, '18
Stanley Hamilton Franklin, '18
Gardner Seabury Gould, '18
Norman Ray Hamilton, '18
John West Kilduff, '18
Julian Tobey Leonard, '18
William E. A. Lutz
Paul Aloysius McGreenery, '18
Herbert Louis McNary, '18
Arthur Aloysius Obert, '18
Frank George Osgood, '18
Miss Gretchen A. Palmer, '18
Frank Wagner Peers, '18
Walter Richard C. Russert, '18
Philo Sherwood Shelton, '18
Willett Freer Searles, '18
Edward Sidman, '18
Malcolm Howard Smith, '18
Henry Caldwell Stephens, '18
James Henry Sullivan, Jr., '18
Samuel William Sweeney, '18
Charles Howell Tavener, '18
Harold William Trease, '18
William Hugh Turner, '18
Louis Franklin Van Zelm, '18
Frederick Arthur Washburn, '18
Franklin Henry Wells, '18
Amory Leland Williams, '18
Jacob Young, '18
Henry Joseph Bruno, '19
Lawrence Blair Cahill, Jr., '19
Lester Van Deventer Chandler, '19
Norman Douglas Conniers, '19
Grant Dickson Green, Jr., '19
Daniel Clifton Hall, '19
Harold Edward Langley, '19
Roger Maxwell Leland, '19
Arthur Wendell Macfarland, '19
Alan Henderson McIntosh, '19
Paul Desnoyers Peltier, '19
William Pinkney, Jr., '19
Arklay Seymour Richards, '19
Edgar Frank Karl Seifert, '19
Marvin Mayfield Stetler, '19
C. Raymond Sullivan, '19
Phil Richmond Thompson, '19

BOOK REVIEWS

The Theory of the Relativity of Motion, by Richard C. Tolman. University of California Press, Berkeley, Cal., 1917. IX+225 pages.

The theory of relativity in some form or other has permeated science and metaphysical thinking for a great many centuries. It has been assumed as obvious that any point of space was like any other point and that any direction in space was like any other direction. That is to say, that space was homogeneous and isotropic. It has been assumed that any point of time was like any other point. It was, therefore, the position in space or time and relative position in space or time that were regarded as fundamental ideas, howsoever convenient the idea of absolute space and time might be. One could go even farther. Velocity has long appeared to be a matter of relative rather than absolute velocity. The theory of relativity has received substantial modifications and amplifications in the last twenty years owing to an attempt to apply it to the electromagnetic theory. From the point of view of the older electricians such as Ampere and Weber, the older idea of relativity held by students of mechanics seemed a reasonably natural assumption to carry along into electricity, but from the point of view of Maxwell and the luminiferous ether whereby all space was conceived as filled with a medium fixed except for small oscillations about the mean position, the idea of a fixed basis, i. e., of an absolute space, was more natural. It has been shown, however, that the differential equations of the electromagnetic theory are unchanged when certain changes are made in the variables representing space and time. This was implied in the work by Lorentz, and the mathematical theory of the possible changes in space and time was given by Poincare. It was however the relatively elementary and bold hypotheses of Einstein which gave to physicists the keen interest in relativity as a physical theory and as a method of deriving important formulas. The theory of relativity has been much discussed because of certain philosophical points of view which seem to be correlated with it, the most fundamental of which is the idea that space and time are not independent but are related to one another so that two events which appear simultaneous to one observer may not appear simultaneous to another.

In this country contributions to the theory of relativity have been made by a number of physicists and of these Richard Tolman is one of the leaders. His book, therefore, represents not merely a digest of the work of others but is to a considerable extent an account of his own investigations.

The scope of the treatise may be indicated by quoting the titles of the chapters, namely:

I. Historical Development of Ideas as to the Nature of Space and Time. II. The Two Postulates of the Einstein Theory of Relativity. III. Some Elementary Deductions. IV. The Einstein Transformation Equations for Space and Time. V. Kinematical Applications. VI. The Dynamics of a Particle. VII. The Dynamics of a System of Particles. VIII. The Chaotic Motion of a System of Particles. IX. The Principle of Relativity and the Principle of Least Action. X. The Dynamics of Elastic Bodies. XI. The Dynamics of a Thermodynamic System. XII. Electromagnetic Theory. XIII. Four-Dimensional Analysis.

The Institute cannot fulfill its whole obligation to applied science unless it is strong in pure science. Some persons fear that the pressure for engineering education at the Institute will overwhelm any small stand for high attainments in pure science.

Richard Tolman is a product of the Institute—a graduate of Course X in 1903, and Doctor of Philosophy in 1910. Such men are rare necessarily, but so long as the Institute is represented in science by names like Hale, Noyes, Abbot, Coolidge, Tolman, there need be no fear.

EDWIN BIDWELL WILSON, Department of Physics.

FORMULA CHARTING—GRAPHICAL AND MECHANICAL COMPUTATION, by Joseph Lipka, Ph.D., Assistant Professor of Mathematics in the Massachusetts Institute of Technology. New York: John Wiley & Sons, Inc. London: Chapman & Hall, Ltd. Cloth. 6 x 9 in., pp. 264, illustrated; $4.

The author of this volume has produced a treatise that is admirable not only for its clarity of diction and logical sequence of ideas, but also because it sets before the general scientist and the engineer principles and processes of the greatest practical utility, which heretofore have not been easily accessible in their entirety. Those who were interested have found it necessary to gather from scattered sources the matter here brought together in a form adapted to the use of practitioners as well as students.

The English bibliography of formula charting is decidedly limited; much of the discussion on methods of forming empirical curves to fit experimental data must be searched out in the proceedings of scientific societies and the contents of scientific periodicals here and abroad; and of the many explanations of the well known slide-rule principle but few contain any attempt to link up that principle with more general conceptions.

Professor Lipka has brought between two covers a well executed presentation of all these related subjects. It should not be understood from this statement that the book is merely a compilation, for it is decidedly not, in the usual sense. The author has summarized and correlated the work of many others, intermingling an amount of his own that is by no means negligible.

In the opening chapter are set forth the elementary principles of the representation of functions by scales, followed by the extension of these principles to include the so-called Mannheim slide rule, the log-log slide rule and others; after which the author proceeds to the graphical solution of equations containing two or more variables, and thence to the subject of nomographic or alignment charts. Probably there is at present no other work in English in which this subject is treated with equal comprehensiveness. Runge, it is true, has devoted some attention to it in his "Graphical Methods," but in so perfectly generalized a fashion that his reader may easily fail to see its true bearing; while the excellent work of Professor Peddle is more restricted in scope.

Professor Lipka's method resembles quite closely that of Maurice d'Ocagne. His underlying theorems are demonstrated in full, and his charts worked out to completion. To many they will be a surprising revelation of the possibilities of graphical methods in enabling one to avoid the drudgery of numerical computation.

The formulas selected for manipulation are typical ones, and similar methods may be applied readily to many others which will suggest themselves to the reader, as bearing on his particular kind of work.

In the highly enlightening chapters on the building of empirical formulas, the interpreting of experimental data and graphical interpolation, the author enunciates the criteria by which to determine the species of curve giving the best representation of a given set of data, and shows in detail, for a large number of actual experimentation reports, the practical processes of deriving such curves and evaluating their constants. The author's well considered order of presentation now becomes apparent, for the reader will at this point realize that, however complicated may be the representative curve with which he has to deal, he is prepared to devise some form of chart by which its equation may be rapidly solved.

The final chapter contains a very lucid exposition of the principles of graphical and mechanical differentiation and integration, leading naturally to the description and analysis of the planimeter, the integraph and the differentiator with which the book closes.

At the end of each chapter are given problems, the solution of which will be of great benefit to students. The illustrations are numerous and well rendered, the typography is of a pleasing clearness. The index is proof that the author has not lost sight of the practical needs of the reader. The book deserves the highest success. —ENGINEERING NEWS RECORD.

AERONAUTICAL ENGINEERING AND AIRPLANE DESIGN, by Lieut. Alexander Klemin. The Gardner-Moffat Co., Inc.

In this book there is no attempt at popular appeal. The general reader, if undaunted by its title, would surely be scared away by its tables, computations, and graphs. A knowledge of the fundamentals of aircraft is presupposed. The author undertakes to give in the first part a good presentation of aerodynamical theory and data, and in the second part a detailed discussion of airplane design, accompanied by innumerable diagrams and illustrations, and endless tables of values. The book is based on a series of articles in " Aviation and Aeronautical Engineering," of which Mr. Klemin was technical editor prior to his entering upon military service. Of the writer's ability and authority there can be no question. The type of thoroughness that has established the reputation of the Massachusetts Institute of Technology is apparent on every page; Mr. Klemin and Mr. Huff, his collaborator, have been associated with the Department of Aeronautics of that institution. The technical phases of the airplane are here treated comprehensively with a wealth of data that must render it valuable not only as a text for the student designer, but also as a trustworthy guide and reference to the experienced airplane engineer.—NEW YORK EVENING POST.

VALUE OF TANKS IN WARFARE.

LIEUT.-COL. HERBERT W. ALDEN, '93, II, assistant to the Chief of Ordnance, U. S. A., in charge of tank engineering work read an interesting paper on the army tank at the session of the annual convention of the Society of Automotive Engineers held in New York City on February 5. Colonel Alden, who is a former president of the society, said the main purpose of the tank, England's answer to trench warfare and the Hindenburg line, was to clean up machine gun nests by killing men, not by destroying forts. Speed and mobility, in his opinion, were the chief desiderata of this class of war engine. The necessity for these features, he said, made impracticable the type of heavily armored tank designed to withstand artillery fire.

" It is doubtful," Colonel Alden said, " if any new means of warfare has had so hard a time getting started and securing its just consideration as has the tank. Thanks, however, to its inherent worth, it is universally accepted as an indispensable arm of the service. The very urgent need which brought the tank into existence was the menace of the machine gun. This is the first war in which the machine gun was used in large numbers. This use in large numbers very nearly revolutionized warfare. Enough machine guns, properly placed, were almost impregnable. Behind barbed wire and in concrete redoubts, they could be taken only at a great sacrifice of man power—usually too great to be considered.

'Something had to be done. The first method was that of intensive preliminary bombardment; that is, firing a stupendous quantity of shells into a given area. The prodigal use of shells for this purpose was staggering, running literally into the millions. Even this prodigal use of ammunition, however, would have been warranted if consistent results had been secured. But they were not. It was quite plain that something new had to come, and come it did in the form of the tank. Fundamentally the tank is simply a device that can come to close quarters with a machine gun and destroy it or its crew.

"It should be remembered that the tank is fundamentally a man killer and not a fort destroyer, also that its greatest defense against heavy artillery fire lies not in the armor it carries but in its own speed and mobility."

After giving credit to the English for producing the first practical fighting machine of this type, particularly to Brigadier-General Swinton, Sir E. d'Eyncourt and Lieut-Col. Sir A. G. Stern, he described how the earliest experiments were hampered by lack of power, added to the fact that the military authorities did not understand how to use these new weapons. It was not until the fight at Cambrai in October, 1917, Colonel Alden said, that the tanks had their first real chance. Two interesting facts developed there, one being the saving of ammunition made possible, and second the manner in which the supposedly impregnable Hindenburg line was crossed and captured. The French decided that a large tank such as the English used would not give the best results, so a small two-man tank was developed, which proved very successful. When the American army entered the war it was decided to use both types.—ARMY AND NAVY JOURNAL, February 15, 1919.

A CORRECTION FROM PROFESSOR CROSS

"I note that in the list on page 28 of the January REVIEW, the name of C. R. Cross, Jr., is listed as in 'Ambulance Service.' Except in an unusually extended sense, this is incorrect, as he was engaged in Ambulance work (with the American Ambulance) for only a few weeks after his arrival in France; then transferring to the American Distributing Service, in which he remained thereafter, this connection being retained while he was in Serbia and Montenegro.

I would suggest that, following the form usual in the record, this should read 'American Distributing Service. Died at Military Hospital No. 64, Dinard, France in consequence of an automobile accident.' This could be abbreviated, though I do not think it is longer than others.

I am

Yours very sincerely,

CHARLES R. CROSS, '70."

NEWS FROM THE CLASSES

1868

Robert H. Richards, Secretary, 32 Eliot Street, Jamaica Plain, Mass.

The Secretary attended the meeting of the American Institute of Mining and Metallurgical Engineers in New York from February 17 to February 20, and while there met many Technology men who were attending the meeting. The list is as follows: J. P. Munroe, Bradley Stoughton, W. Spencer Hutchinson, A. H. Rogers, R. H. Richards, Adicks, Charles W. Goodale, Holbrook, Mossman, A. P. Watt, Burr A. Robinson, Corse, Wallace MacGregor, I. W. Litchfield, H. M. Howe, Burgess, B. E. McKechnie, Carney, Morris, Boyd Dudley, Merriweather, N. B. Patch, Hursh, Polhemus. We had a very good paper from J. P. Munroe discussing the labor situation and affairs at Washington. We also had a very good paper from I. W. Litchfield on the employment situation in which he is actively engaged in Washington.

The secretary and his wife and his wife's sister, Miss C. W. Jameson, are to sail March 21 for Savannah, Ga., and from there they go to Jacksonville, Fla., to spend a week more or less in thawing out the family colds, which have been very persistent and tiresome.

Mrs. Richards and I have been reading Thompson's "Brain and Personality," which is a wonderful book on psychology and tells us how the brain is trained to do its work, and tells us of tire poison and how to do the most work with safety. If, after each exertion one rests a little to allow the blood to carry away the poisons that are made by that exertion, one can do a great deal more and last a great deal longer. We also find many wonderfully interesting ideas in "Psychology and the Day's Work," by Swift, particularly Chapter V, on Fatigue and its Psychology.

We heard somewhere of an incident between a manager and his worker. I think he had been reading "Brain and Personality," and this is the story of the incident: The manager had a worker, a powerful man moving pig iron a short distance by hand, and he came to the man and said: "Would you like to earn more money?" The man said, "Sure, Sir." Then he asked if he was willing to do what he told him, and after some hesitation, he agreed. The previous condition was, the man had moved twelve tons a day and was all tired out and used up at night. He probably worked very hard for half an hour without giving his kinetoxins a chance to be washed out with blood after each exertion so that they accumulated the whole day, even though he put in what he thought was plenty of rest. The new scheme proposed was that he should work by the watch and after moving each pig of iron, he should rest just so long. At the end of the day the story is that he had moved forty tons of pig iron and when he went home at night he was fresh and gay as a lark and spent the evening hoeing his garden.

We, too, have had some fun gardening up in Randolph, N. H., where we have grown peas and beans and potatoes and other things, but the broken arches of my feet give me so much trouble that I cannot go out and work myself. We, too, had a woodchuck, but we disposed of him with a little twenty-two rifle before he had done any damage.

Nathaniel Walker Appleton writes from East Pepperell, Mass.:

I could not have been in Boston on December 19 as then I was busy chopping down trees for next year's firewood; even a man of my years, I find, can do hard and laborious work with success and a gain of health. I hope that all went off with pleasure and progression at the class of '68's fiftieth anniversary. Wonder where we all will be at the next fiftieth (or hundredth) anniversary. Belief in the hereafter is a strange thing — one person thinks one way and another, another way; we certainly will be free from care and anxiety or discomfort.

Last spring, after getting perhaps one-half acre or so ploughed and harrowed, personally and alone planted potatoes, corn, beans, etc. as the time came to sow, weeded by hoe or hand the above and destroyed the bugs. Harvested as things became ripe, those I did not eat at my little summer cottage, I sent down home. Potatoes, corn, peas and turnips very successful. Woodchucks and deer got into over two hundred eighty-five foot row of beans. After digging potatoes (I preferred to do all the work if possible alone) I began to chop down and put into cord wood various trees, collect brush into large piles — which piles (when eight or ten inches of snow on ground in December) I burned.

1870

CHARLES R. CROSS, 100 Upland Road, Brookline, Mass.

Our classmate, Frederick Brooks, died at the Massachusetts General Hospital on January 10, last, in consequence of burns received in the endeavor to extinguish a fire which had broken out in the upper portion of his residence. Though he was provided with a fire extinguisher the flames were too great to be subdued and enveloped his person, causing such severe injury that he survived only a few weeks. He leaves two brothers, Charles B. Brooks of Boston, at one time a student at the Institute and Morgan Brooks, professor of Electrical Engineering at the University of Illinois. Frederick Brooks never married.

Brooks graduated from Harvard College in 1868 where he had made a fine record in mathematics and thereupon entered the Institute to pursue the Course in Civil Engineering. As was then the case with most of those who were college graduates, he entered so far in advance that he was not well known except to those pursuing the same courses and many of his classmates came to know him better in subsequent years than while a student. He was an excellent scholar, a man of great dignity and uprightness of character, whose judgment on all questions was held to be valuable. He was widely known for his earnest advocacy of the introduction of the metric system.

In the early days of the physical laboratory at the Institute he was interested in its plan and contributed to its equipment a valuable portable siphon barometer which is still in regular use by the students.

A sketch of his professional work by Mr. Desmond Fitzgerald, with whom at an early period of his career Brooks was associated, will be published in the Proceedings of the Boston Society of Civil Engineers of which he was at one time president.

The secretary has also learned of the recent death of our classmates, Theodore F. Tillinghast and Charles A. Wilbur, but is not at present in possession of further information, which, however, he hopes to secure later.

Members of the class of 1870 in common with other Institute students of that date will feel sincere regret at the decease of Edward C. Pickering, at that time assistant professor of Physics, afterward Thayer professor at Technology, and since January, 1877, director of the Harvard College Observatory. His death occurred on February 3, last, after a short illness from an affection of the heart with supervening pneumonia. The class will remember him with appreciation of his devoted efforts to make a difficult subject clear to them and the skill with which he conducted the always successful experiments that illustrated his lectures.

This is not the place to tell of his great work of research in physics and astronomy, which have given him a foremost name throughout the whole scientific world, but the following comprehensive statement from the formal announcement of his death to the Astronomical Society is an excellent summary of it:

> His success in introducing new methods into the observatory, particularly with regard to the determination of the brightness and the spectra of stars, his extraordinary ability in carrying out large projects, and the extent and diversity of his experience and knowledge, have given him a permanent place among the great names in the history of science.

Fuller sketches will be found in "Science" for February 14, 1919, and in the "Scientific Monthly" for March, 1919, the latter of which is accompanied by an excellent full page portrait.

It is a great satisfaction to recall that to the last of his life he remembered with pleasure the days of his Institute teaching and the students of that time whose names were still in his memory and whom he was always glad to meet when opportunity offered.

He retained without abatement his interest in the Institute itself and rejoiced in its prosperity. At the dedication exercises of the new buildings at Cambridge he was present and at the reunion of the graduates of the Course in Physics, which originated with him in 1873, he spoke at some length of the early work of the Rogers Laboratory of Physics and of his interest in its later development.

1873

Samuel E. Tinkham, Secretary, The Warren, Roxbury, Mass.

No report received from the secretary.

Word of the death of Daniel Beckwith reached the Review office February 21, 1919.

1874

Charles F. Read, Secretary, Old State House, Boston, Mass.

No report received from the secretary.

Frank A. Magee, Course II, formerly president of the Magee Furnace Company, died at his home in Pomfret, Conn., on November 21, 1918.

1875

E. A. W. Hammatt, Secretary, South Orleans, Mass.

The thirty-seventh annual meeting and dinner of the class of '75 was held at Young's Hotel at 7 p.m., February 21, 1919, with the following members present:

Beal, Bowers, Dorr, Goodale, Hammatt, Hibbard, Lincoln, Mixter, Plimpton, and R. B. Smith.

President Hibbard called to order at 8.45 P.M. and the secretary read the report of the last meeting, which was approved. He then submitted his reports as secretary and treasurer, which were accepted. Beal said that as the report of the Executive Committee (the dinner) had already been disposed of, no further action was necessary.

Upon motion, duly seconded, the secretary was instructed to cast a ballot for the election to office of the old board, which being done, they were declared elected. This means that our officers for the year are: President, Thomas Hibbard; vice-president, B. L. Beal; secretary-treasurer, E. A. W. Hammatt; executive committee, B. L. Beal, S. J. Mixter, W. P. Willard.

Since the thirty-sixth meeting the secretary has received notice of the death of the following members: Thomas Aspinwall, March 2, 1918; George B. Ferry, January 29, 1918; George B. Frye; Charles H. Williams, M.D., June, 1918; John A. Hildabolt, December 9, 1918; Frederick W. Stickney reported by the postmaster February 26, 1919; also Jacob M. Taylor, on February 20, 1919.

Letters of regret at inability to attend the meeting were read from Edes, W. S. Sargent, Stanwood, Sherlock, Shockley and Homer, the latter having lost, during the past few months, a daughter and son from bronchial pneumonia.

The meeting was adjourned at 10.30 P.M.

1876

JOHN RIPLEY FREEMAN, Secretary, 815 Grosvenor Building, Providence, R. I.

Death has been reaping far too vigorously in '76 during the past few years. A little more than one-third of those who graduated with us have gone on to their reward, and within little more than two years death has taken James, Schwarz, Townsend, Aspinwall, Galloupe, Waitt, Norcross and Buss;—but at forty years after graduation such things are likely to happen.

An account of Theodore Schwarz's life and the steadfast heroism of his late years has already been given in the REVIEW.

Samuel James's loss also is keenly felt by the survivors; all remember his warmth of good fellowship although we had seen little of him for many years; being a mining engineer and following his profession first in a wildly settled district in North Carolina, later in the Rocky Mountain region, and near Salt Lake City, in Mexico, Texas and the State of Washington, he had become known as one of the very best smelter experts in America.

Walter D. Townsend also was a miner and possessed more of the wanderlust than any other Technology graduate. He chose mining engineering largely because it promised to gratify this desire. In early boyhood books of travel were his chief diversion and on graduation he promptly betook himself to Colorado and back into the mountains, but this was not far enough, and it was not long before he was off to Japan and a little later to Korea, which thirty-five years ago was relatively far more distant from Boston than today and about the most distant point to which an engineer could retreat. In the course of his travels he had fallen in love and married a most charming Japanese lady and finally settled down in Chemulpo, and in due time became one of the best known and most highly respected American residents.

In Korea he became director in various mining companies, notably the Chicksan Gold Mining Company, and also had joined with his son-in-law in founding the important importing and exporting firm of Townsend & Company.

The writer had a most enjoyable day at Townsend's home in Chemulpo two years ago, and found it stocked with pretty much the whole line of current American periodical literature and with the "New York Daily Times" also in evidence, so that the family were about as well posted on happenings in the States as though living at the old home. As Townsend remarked, "We are merely four weeks late in our calendar." For years his home had been a rendezvous for naval officers and in the old days there was nearly always a war vessel of America and each of the important European nations lying in Chemulpo harbor, as a central point to China, Manchuria, Korea or Japan, and his life appeared to have been a thoroughly happy one. He told me that he was not feeling just right and was coming to New York and Boston for a medical consultation, and as will be remembered by many of his friends, he did this a year ago, but was made very lame by an accident on shipboard on the way over here which prevented many of the visits to old friends on which he had long been planning. He was able to spend a day at the writer's home and we rounded up those of the boys within telephone call and together motored to Sharon and made what proved our last call on Schwarz. Townsend returned to Korea apparently in fairly good health, but did not long survive. He died March 17, 1918, and leaves a wife, two children and several grandchildren.

Thomas Aspinwall (who died March 2, 1918) had spent his whole professional life in the vicinity of Boston, and like his father before him, was a well known figure in the town life of Brookline. Almost immediately after graduation, he formed a partnership with his warm friend, Ned Lincoln, a graduate of the preceding class, and together for forty years they took an active part in the civil engineering work of the community of which Boston is the center.

A few years ago Tom confided to the writer that he regretted he had not followed the healing profession, toward which he had had at one time strong inclinations, and which he felt gave greater opportunities for identifying one's self with the community in which he lived. That he would have made a success in this line, there can be no doubt, but nevertheless he has left behind a fine record of faithful service and of usefulness in his community.

Francis E. Galloupe had not been active in business in recent years, but in earlier years had a variety of activities in mechanical engineering and manufacturing. First at the old Rhode Island Locomotive Works, later at the Winooski Woolen Mills in Vermont. In later years he devoted himself to real estate development and made his home in Lynn and Revere, Mass. He retired from business with a modest competence a few years ago. He leaves a son, a graduate of West Point.

Henry M. Waitt, who died December 16, 1917, will be remembered as the most studious member of our class and some of the "civils" will remember that he was so conscientiously a slave to duty that when all the rest of us one fine afternoon had decided we could spend the time to better advantage than in the classroom of a certain unpopular instructor, he alone heard the lecture—and we sorrowfully remember that later about half of the examination paper of that course asked questions on the topics that were to be imparted that afternoon. Henry was for several years an instructor in the Civil Engineering Department of the University of Minnesota and later became a bridge engineer with the Chicago, Burlington and Quincy Railroad until failing health prevented. Always faithful and with a warmth of affection for his old-time friends.

E. A. Buss, although with us during only a portion of our course, was known to all the class, for in those days with smaller classes it was possible for each to be intimate with all of his classmates and also know a majority in the classes above and below. He practiced his profession of mill engineering in Boston almost continuously for forty years. In the past few years he had so steadily devoted himself to his professional work and to outside charitable and philanthropic interests that his health began to fail, and in the middle of the winter of 1917-18 he had a nervous breakdown. He recently went to the hospital for a surgical operation, which was successful, but his strength previously had been so weakened that he did not rally well. Mr. Buss also had been active in promoting the work of Morgan Memorial in Boston. To this he had given much of his time and also his financial support, and from there he went by invitation to Brooklyn, N. Y., where the "Good Will Industries" were founded along similar lines to the work of Morgan Memorial. Mr. Buss, after aiding to start this enterprise, had continued his interest in the work. He was a member of Boston Society of Civil Engineers and belonged to the New England Waterworks Association. His wife died about eight years ago, and of late years Mr. Buss had made his home in Woburn with Mr. and Mrs. Frank W. Howard, who were old-time friends.

Edward M. Norcross was the third member of our class to die during the month of March, 1918. He had showed signs of failing health for some time, but was seriously ill only about a week. His whole life work was that of treasurer for the William C. Norcross Company of Boston, wholesale and retail dealers in brick, cement, and other building materials. His brother was a member of the firm. "Ted," as he was popularly known, while of a cheerful and happy disposition, was led to avoid social functions by reason of his hearing having become impaired, which, as with many other men, made him unduly sensitive—but he followed all Tech literature with keenest interest. He left a wife and a daughter twenty-one years of age, also a son about nineteen, all of whom reside in Needham where Ted had made his home for many years.

1877

Richard Augustus Hale, Secretary, Essex Company, Lawrence, Mass.

Charles L. Harris, Born November 4, 1853; Died February 22, 1919.

The secretary regrets to announce the death of Charles L. Harris, '77, which occurred in Mobile, Ala., on February 22, 1919.

Charles Leonard Harris, who died in Mobile, Ala., Saturday, February 22, was born in Boston, Mass., November 4, 1853. He was the second son of George S. and Sarah Fiske Bacon Harris. When eleven years old he moved with his parents to Hannibal, Mo., where his father was employed as land commissioner of the Burlington railroad. The family moved to Burlington, Ia., in '69 as the road built west, and came to Lincoln in '72. He attended the Denmark Academy and the Massachusetts Institute of Technology, finishing with the class of '77. Before he received his degree as civil engineer he was taken critically ill with typhoid fever. In the four years of convalescence which followed he devoted his time to reading law in the office of Judge Oliver P. Mason and was admitted to the bar.

In 1882 he became a member of an engineering party, making a railroad survey in the western part of the state and in the eastern part of Dakota, which kept him in the open for the greater part of a year, improving his health to the extent that he entered the employ of the railroad and continued in the service for a number of years. In 1883 he was married to Mary E. Day of Omaha, and settled in Neligh, where he was employed for seven years as cashier of the Citizens' Bank. For twenty years he made his home in Missouri, the greater part of the time being spent in St. Louis, where he was engaged in the railroad supply business. Nine years ago, acting on his physician's advice, he retired from business life and took up residence on a farm in the Ozark Mountains where he lived until two years ago, when he returned to Lincoln. Last fall he, in company with his wife, went south for the winter. Soon after arriving in Mobile he suffered a paralytic stroke from which he apparently recovered and was in good health just prior to his death, which resulted very suddenly from heart failure.

Mr. Harris was a man of strong family affections. The people, place and ways of the past were very dear to him. He retained his membership in the Technology Club of New York City and never allowed his association with the Technology Institute to cease. He was a man that made many strong friendships. As a student of American history he was widelv read, in especially that of the West. He loved the outdoor world and enjoyed that part of his life which was spent among the people of the Ozarks. He was an enthusiastic golf player and spent a great deal of time on the links. He was a devout member of the Episcopal Church and dated his active church life from the days when as a youth in college he used to attend service in Phillips Brooks' Church in Boston.

He leaves a wife and one daughter, Celia Harris of New York; also three brothers, Fred L. of Edmonton, Canada; Edward K. of Pasadena, Cal.; John F. of New York City; and one sister, Mrs. Celia E. Harwood of Lincoln.

Since leaving the Institute his interests have been in the West and South, and he has not attended the class reunions. His letters each year have shown the interest which he has taken in Technology and the loyalty to its traditions.

While in St. Louis he was connected with the Scullin-Gallagher Iron and Steel Company, which operated the largest single steel foundry in the country. He retired in 1910, going to his new farm in Ozark County, which he had recently bought.

His son, Clark Woodman Harris, was private in Company F, 352d Infantry, U. S. A., and died of pneumonia in service in France, October 5, 1918. He was a strong, hearty young man twenty-nine years of age, with promise of a long life, and his death was a shock to every one and the supreme sacrifice to his country.

The following is an extract of a letter from Mrs. Harris:

> I think you know how he loved the Tech. It was his great regret that he was unable to finish with his class.
>
> The years that he spent with the Ozarks were particularly interesting to me, because he was able to be of such real service to the kindly people among whom he lived and of whom he was so fond.
>
> He had a well equipped cattle farm of eight hundred acres; as it was somewhat remote, it was necessary to have a blacksmith shop upon it and a full equipment of tools of all kinds. He had the best of farm machinery as well as all appliances for first aid to the injured, medical stores, etc. All of his neighbors had free access to everything he possessed. Our farm machinery was hauled over the rocky roads, each of the neighbors using it in turn and knowing that it was his for the asking. The shop and tools were offered in the same generous manner.
>
> The new methods of farming that Charlie tried out successfully were adopted by others. When the women of the neighborhood were unable to market their butter because of lack of ice, it was his idea that they make cheeses instead, and he saw that they had the simplest methods after careful home experiments. All of this was done in an absolutely unconscious manner.

I am telling you this because I believe you will like personally to know that the part of his life which seemed of little importance has really the most significance.

We went to the Ozarks because his physician felt it was his one chance to regain his health.

On February 26, 1919, Richard A. Hale of this city was re-elected secretary and treasurer of the class of '77, M. I. T., at the annual meeting of the members last evening at the Engineers' Club in Boston. President Robert D. Andrews presided and those present were:

Robert D. Andrews of Andrews, Jones & Rantoul, Architects, Boston; Francis H. Bacon of F. H. Bacon & Company, Furniture and Interior Decorators, Boston; W. H. Beeching, with Little, Brown & Company, Publishers, Cambridge; George W. Capen, Architect, Canton Corner; E. W. Davis of the Puritan Press, Boston; Richard A. Hale, principal assistant engineer, Essex Company, Lawrence; C. F. Lawton, commissioner of Board of Public Works, New Bedford; B. C. Mudge, with the United Shoe Machinery Company, Beverly; F. I. Sherman, Civil Engineer, of West Mansfield; B. T. Williston, manager of United Injector Company, Boston; C. H. Norton, assistant engineer, with the Massachusetts Highway Commission; H. C. Southworth, in business, Stoughton, Mass.; A. L. Plimpton, assistant engineer, Boston Elevated Railway Company; Edmund Grover, civil engineer, Walpole, Mass.

The old board of officers was re-elected for the ensuing year: President, Robert D. Andrews; vice-president, B. T. Williston; secretary and treasurer, Richard A. Hale.

Letters were received from various members who were unable to attend. G. G. Baldwin, vice-president of the American International Corporation; George W. Kittredge, chief engineer, New York Central Railroad; W. H. Lawton of Newport, and others of the class who have had sons in active service. C. A. Clarke had a son, Lieutenant Clarke, killed in action in France last year. W. H. Whidden had a son, Captain Whidden, who was the first American surgeon wounded in the war and later died of pneumonia in Cambridge, Mass., where he was stationed.

Announcements were made of the death of Frank E. Peabody and I. M. Story, members of the class, who passed away during this last year.

1878

E. P. Collier, Secretary, 256 Summer Street, Boston, Mass.

There were present at the alumni banquet in Walker Memorial the following members of the class: Collier, Higgins, Rollins, Schwamb and Williams.

1879

Frank G. Stantial, Secretary,
Care Cochrane Chemical Company, 148 State Street, Boston, Mass.

No report received from the secretary.

Professor George H. Barton of Massachusetts Institute of Technology will take up the position of professor of geology at Tufts College left vacant by Dr. Alfred Church

Lane, who has obtained leave of absence permitting him to do educational work with the Young Men's Christian Association in France. Professor Barton will enter upon his duties with the beginning of next term. He is affiliated with several national geological societies.

1881

Frank E. Came, Secretary, 17 Metcalf Apartments, Westmount, Montreal, Canada
Frank H. Briggs, Assistant Secretary, Hotel Puritan, Boston, Mass.

Lieut. Edward Hooper Gardiner of the 50th Aero Squadron, A. E. F., was killed in action September 12 in the St. Mihiel drive. He was the only son of Edward G. Gardiner of our class.

The present address of Frank G. Dort is Place Viger Hotel, Montreal, Canada.

1882

Walter B. Snow, Secretary, 136 Federal Street, Boston, Mass.

Granville T. Snelling, Assistant Secretary, 114 East 28th Street, New York, N. Y.

The thirty-seventh anniversary dinner was held at the Walker Memorial on Thursday, February 6, with the following in attendance: Darrow, French, Gooding, Hall, Herrick, Jenkins, Keyes, H. F. Ross, Walker and Snow. Recent letters from members of the class convey the following information: Harry W. Jones is district vocational officer in charge of District No. 10, Division of Rehabilitation, Federal Board for Vocational Education, covering the states of Minnesota, North and South Dakota and Montana. From Thomas B. Carson:

> It would be the greatest pleasure to drop in on you all some day and have a personal visit. I do not suppose that will be very soon but sometime at least I hope to do it, and as I am still feeling far from old at 59, I hope it will be all right if I defer the matter for eight or ten years yet.

From James Deering, from his Southern home, "Vizcaya," at Miami:

> Your letter of January 29 comes under my eye for the first time at this moment. I have been out on a fishing cruise. I trust that the anniversary dinner went off well and that everything prospers with you.

From Walter H. Hersey:

> I should like very much to be with you but fear I cannot. Unfortunately the Memorial Building is not built for autos or wheel chairs.

From Miss Ames:

> The notice of the thirty-seventh (! ! !) anniversary dinner makes me gasp. Great heavens, are we as old as all that? 'Twas only the other day that we had the twenty-fifth anniversary and that seemed preposterous. Let's drop arithmetic and call it simply an anniversary, or we shall feel obliged in all decency to adopt an elderly aspect. I'm still able to walk without a cane.

At the thirty-eighth anniversary dinner of the "Tech" Arthur W. Walker, its first editor, was one of the guests and spoke in favor of giving credit for editorial service thereon.

1884

Harry W. Tyler, Secretary, M. I. T., Cambridge, Mass.

The death of Mr. Alfred Stebbins has recently been reported to us, though it is understood to have occurred some weeks ago.

A wedding of international interest took place at noon, March 24, at the Mexican Embassy, when Señorita Maria Bonillas, second daughter of Ambassador Bonillas, became the bride of Lieut. Guiseppe Coppola of the Italian Army, an officer of the Royal Guards, recently on aviation duty with the Italian Mission to the United States. The ceremony took place in the embassy ballroom, which was converted into a chapel.

Members of the class will learn with regret of the accidental death of Puffer's son, Lewis, at Hartford on Friday, March 21. He had just been released in November from the army aviation service and settled down with his wife for what seemed a happy life.

The following plan prepared by a committee appointed for the purpose was approved by the ten members of the class who met at the alumni dinner, March 1:

Meet at the Walker Memorial, Thursday noon, June 19, and have luncheon there. A room will be reserved where luggage may be left, and if any member of the class wishes, arrangements can probably be made for accommodations in the dormitory.

In the afternoon, go to Concord and see the historic places. Members of the class who can furnish a car to carry those who would like to take this trip will please report to the secretary. If enough cars are not available, a Blue Line sight-seeing auto may be chartered. Attendance at some good show in the evening may be a pleasant way to end the day.

Friday morning, go to Gloucester and put up at some hotel on Eastern Point, or other attractive site, and in the afternoon enjoy Old Ocean and visit nearby places of interest, such as Rafe's Chasm or Norman's Woe. In the evening, hold our annual class meeting, with wives and children as privileged guests.

Saturday forenoon, take a trip to one of the historic places north of Gloucester, Coffin's Beach, via Squam River. This trip would be by boat, except that those who have cars with them may reach the beach in that way. Dearborn, who is familiar with the Cape and its attractions, will act as official guide during these two days. A trip by trolley "around the Cape" may be taken as an alternative to the Coffin's Beach scheme, by those who may prefer land to water.

Back to Boston Saturday P.M.

1885

R. H. Pierce, Acting Secretary, 462 Walnut Street, Newtonville, Mass.

Newell, like many others of '85, made various desperate attempts to get into army work, but finally had to content himself with more mild civilian occupations, being one of the innumerable "dollar-a-year" men. His contribution was in connection with Colonel House's "Inquiry" and his particular sphere of activity, problems of engineering reconstruction in Asiatic Turkey, a country whose area, topography, climate and other conditions are quite similar to those of the arid west of the United States where he has spent most of his life. He also prepared for the

American Committee of Armenian and Syrian Relief a statement on the possibilities of irrigation and water power in Asiatic Turkey. As a member of the Committee on Reconstruction Problems of the National Research Council he has also given considerable time to discussing these from the engineering standpoint and calling attention to the various agencies which should actively be concerned with reconstruction, urging that public works of value be undertaken at once without waiting for possible lower prices.

Ike Litchfield writes from Washington:

> I am sending you under another cover copy of the United States Employment Service Bulletin containing an article on "The Employment Service and Demobilization" from the annals of the American Academy of Political and Social Science, which will give you an idea of what I have been doing here in Washington. When I first came here I placed about from four to five hundred Tech men, mostly as commissioned officers in the production work of the government, in June, with three other men formerly of the United States Public Service Reserve, of which I was an associate director. When the employment service was formed, about February or March, 1918, I was made chief of the Clearance Division and later on became chief of the Skilled Labor Section, which had complete charge of mobilization of skilled labor during the war. After the armistice was signed I became chief of the professional section, which I am now organizing. I expect that this work will keep me here for two or three months more, after which I shall probably locate in the vicinity of New York City.

Arthur K. Hunt writes:

> The First National Bank of Boston organized a corporation called The First National Corporation. It has an office at No. 14 Wall Street, New York, and last October I came here in charge of it.

His permanent address until further notice will be in care of the above company.

Charlie Richards, with his usual modesty, writes:

> I do not believe I have any news for the Review. Perhaps I might say that I have put in two years of strenuous work as chairman of a committee appointed by the Board of Estimate to make an Industrial Educational Survey of New York City, which has just come out of the press.

Only those who are familiar with this undertaking know what a strenuous job this was. It has been a hard and an important undertaking well accomplished.

Hammond V. Hayes' address is now No. 84 State Street, Boston.

1887

Edward G. Thomas, Secretary, 213 Floyd Street, Toledo, Ohio

The death on February 8 in Philadelphia, from pleurisy and pneumonia, of Dr. Frederic Putnam Gulliver, of Norwich, Conn., is announced. Dr. Gulliver was connected with the chestnut commission in Philadelphia for some years, prior to which he was topographer in the United States Geological Survey. For eight years he was master of science at Saint Mark's School in Southborough, Mass. He was secretary of Section E (Geology and Geography) of the American Association for the Advancement of Science from 1907 to 1911.

1888

William G. Snow, Secretary, 95 Milk Street, Boston, Mass.

Word has reached the secretary of the death on February 11 last of Philip Henry Wynne at his home in Old Deerfield, known as "The Manse." Wynne was born in Elizabeth, N. J., January 11, 1868. He was connected with the class of '88 from 1884 to 1886. The secretary has no account of his early activities after leaving the Institute but it is recorded that in '94 and '95 he was engineer of the Wire Department, City of Boston. From '98 to 1900 he was engaged in the electrical department of the Boston Elevated Railway. He then went with the L. E. Knott Apparatus Company, Boston, as a designer of apparatus until 1906, when he became instructor in Physics, University of Texas, until 1908. He afterwards became connected with the Eldredge Electric Manufacturing Company, Springfield, Mass. In the intervals not stated he was engaged in special and consultation work, improvements in electrostatic ore separators and in various phases of electrical engineering work. Failing health forced him to retire from active work several years ago. Outside of his regular vocation Wynne was much interested in historical subjects. He was married in 1899 to Miss Agnes Whiting of Springfield, Mass., who survives him.

Fourteen members of the class were present at the annual alumni reunion and dinner March 1, 1919.

William L. Dearborn's present address is care Public Works Office, Norfolk Navy Yard, Norfolk, Va.—Maj. Fred J. Wood's present address is 2421 18th Street N.W., Washington, D. C.—John Blodgett is now located at 25 East 30th Street, New York; Stephen Child is with the United States Housing Corporation, 613 G Street N. W., Washington; Herbert F. Pierce is at Bath, Me., engaged in housing work for industrial workers.

1889

Walter H. Kilham, Secretary, 9 Park Street, Boston, Mass.

The annual dinner was held at the St. Botolph Club, Boston. President Thurber officiated as usual. Those present were: Thurber, Hawkins, F. L. Pierce, Hunt, W. L. Smith, Kilham, Guppy, A. L. Davis, Truesdell, Gleason, Whiting, Kunhardt, Williston, Lewis, J. P. Gilbert, Wales, Bliss, Hart, Orrok.

Some desire was expressed to celebrate the thirtieth anniversary and the president appointed a general committee consisting of Wales, Whiting and Kilham to consider same.

Lieutenant-Colonel Guppy described his experiences in France with the Railroad Engineer Regiment, which he stated was principally occupied with salvage work and when that was over, considering that they were a picked lot of railroad experts, they were put to work mending ordinary roads.

Major Whiting told of his experiences in connection with the Aviation and Chemical Warfare Service. He was present at the fall of Sedan and had at least one flight in the air at Washington, D. C.

F. L. Pierce told of experiences in connection with the Draft and Fire Prevention Boards and Hawkins of his work in Washington during the war. Frank Hart described the general situation of the Institute and Juddy Wales, on request, again recited "Captain Sims." Wales was induced to bring about a dozen of his marine etchings, which were hung on the wall and much admired.

1890

GEORGE L. GILMORE, Secretary, Lexington, Mass.

Batchelder Brothers, dealers in coal, of which J. L. Batchelder is senior member, in December opened a new Boston office at their plant, at 838 Massachusetts Avenue. The building is of brick, one story in height, and entirely devoted to office purposes. It was built at a cost of about $20,000.

W. Z. Ripley was appointed by the Governor as a trustee of the Boston Elevated Company, but as Ripley had too many other matters to attend to, he was obliged to decline, as he is now engaged in reconstruction work at Harvard, work for the National Shipping Board, and the drafting of new railroad legislation for the Chamber of Commerce. He was one of the federal mediators in the settlement of the garment workers' strike in New York in January, affecting 35,000 employees. At a meeting February 16, of the Boston Central Labor Union, the formation of a Labor College was laid before the meeting, and it was announced that among others, Prof. W. Z. Ripley had expressed a willingness to give a course of lectures.

More honors have come to the class of '90.

W. B. Poland, who is food director for Europe, with headquarters at 3 London Wall Building, London, E. C., and was given the Cross of the Legion of Honor in July, 1917, has recently been made a Commander of the Legion of Honor by the French government.

Winthrop Coffin of Brookline, Mass., has been appointed a trustee of the Boston Elevated Railway Company to succeed Mr. Galen Stone who has just resigned, and who was a partner of our classmate, Charles Hayden. Mr. Coffin is a member of the firm of Coffin & Burr, bankers; director of the United Electric Securities Company, the Greenfield Electric Light and Power Company, the Boulevard Trust Company, and is a member of the American Academy of Political and Social Science.

Copies of some interesting letters from Schuyler Hazard, Jr., the son of our classmate, have just been received by the secretary. The young man is with the 331st Battalion, Headquarters Company, Tank Corps, in France.

A letter of January 18 from Lieut. John Balch Blood, of the United States Navy, showed that at that time he was at San Juan Harbor at Porto Rico.

J. K. Noyes' address is No. 43 Davis Street, Binghamton, N. Y.

George E. Hale is a member of the Executive Committee of the International Cotton Conference, appointed in Washington in January; and G. L. Gilmore is a member of the Commission that goes abroad in May to arrange for an International Conference to be held in New Orleans in October. The trip will probably last about five weeks. The Commission sails May 10 on the steamer "Lapland."

Miss Margaret Hale, daughter of Mr. and Mrs. George E. Hale, was married December 25 to Lieut. Paul Armand Scherer. The young couple are now in California.

George A. Packard sailed on February 14 with Mrs. Packard from New York for Rio Janeiro. He will probably be in Brazil from four to six months investigating mining properties.

From the post office authorities has come the news of the death of Frederick A. W. Harris, on February 13, 1918.

Letter from F. H. Dodge advises that his boy is in France, where he has been since June. He was in the Argonne Drive, and in the finals in Belgium, and came out O.K. The wedding of his daughter will undoubtedly take place early in the summer when her fiance returns from the other side.

Letter recently received from Andrew Woodman, in Chicago, advises that he is in control of two plants that have been making parts of the steel construction for ninety-five of the ships at Hog Island; all of the boilers for thirty-six of the wood ships, nine of the steel ships, and seven of the tugs. He also had orders for twenty locomotive cranes for the Director-General Military Railways, but the arrival of the armistice cut out fifteen of these, so that he only produced five.

Schuyler Schieflelin, who was captain in the 493d Aero Squadron, formerly the 81st, has recently returned from France. He writes: "Battles none, wounds none. Hope for better luck next time."

The General Electric Company has formed an export corporation to go after foreign trade. It will probably be known as the International General Electric Company. Charles Neave, '90, of Fish, Richardson & Neave, Boston lawyers, will be chairman of the board of the new organization, and Gerard Swope, '95, who has resigned as vice-president of the Western Electric Company, will be president.

The new company will differ from the export organizations which have been formed by other industries, notably copper, steel and paper, in that it is exclusively a General Electric proposition.

It is figured that the collapse of German industry has created some $60,000,000 or $70,000,000 worth of export electrical business annually. The big German electrical companies were formerly large exporters, and it is the hope and expectation of the General Electric interests that they will be able to corral a substantial part of this former German business. Before the war the German manufacturers used the General Electric Company patents, but it is a question if they have not abrogated this right.

Following is a list of the men of the class who have been in the government service during the war. The secretary will greatly appreciate being advised of any omissions. We are very desirous of having a complete record of what the members of the class have done in the past four years of the war:

Charles H. Alden, IV, Capt., Asst. to Depot Q. M., Q. M. C., A. E. F., France. —Spaulding Bartlett, V, member Joint Woolens, Advisory to Council of National Defense (civilian).—John Langdon Batchelder, VII, Red Cross work (civilian).—John Balch Blood, VI, executive office, U. S. S. "Kwasind."— Edgar James Borden, I, Industrial Dept., C. & R., Hull Div., Portsmouth Navy Yard (civilian).—Ernest H. Brownell, I, U. S. Naval Aviation Forces, Foreign Service, 4 Place D'Iena, Paris. —William C. Curtis, Capt., Med. Corps.—Darragh DeLancey, Secretary War Dept. District Board of Second District, Conn. (civilian).—Walter Ellis, VI, Finance Comm., Safety Comm. (civilian).—William Parker Flint, II, Electrical Work in Shipbuilding (civilian).—Samuel D. Flood, II, Ensign, U. S. N., U. S.S. "Yankton." —George W. Fuller, V, Consulting Engr., U. S. Pub. Health Bureau, Camp Sanitation, Water Supply (civilian).—Alfred H. Granger, Capt., Engrs., U. S. A., Camp Humphreys, Va.—George L. Gilmore, II, Production Branch on Textiles, Q. M., Boston (civilian).—George Ellery Hale, Chairman Nat'l Research Council (civilian). —Winthrop T. Hodges, IV, Sergt., 19th Co., Mass. State Guard, Nahant Public Safety Comm.—Lois Lilley Howe, IV, Architect of Canteen, Boston Common Coffee House, Ayer, Mass. (civilian).—Francis Howe Kendall, I, Chairman of Finance Comm. of Belmont, Mass. (civilian).— Bertram H. Mann, VI, Assistant in Building and operating railroad to Camp Pike (civilian).— George L. Nelson, II, Corp., Mass. State Guard, 1st Motor Corps (civilian).— Henry B. Pennell, IV, Capt., State Guard, 14th Regt., Chairman Safety Comm. (civilian).—William B. Poland, I, Director in Holland of American Comm. for Relief in Belgium. Honored with Cross of Chevalier of Honor by President Poincaire of France (civilian).—Knight C. Richmond, II, Industrial Inventory, Police Constable, Providence, R. I. (civilian).—Calvin W. Rice, VI, General Engr. Comm., Council of National Defense (civilian).—Herbert

George Ripley, IV, Railway Investigation for Government (civilian).—William Zebina Ripley, I, Sub-Comm. Council of Nat'l Defense for Mediation and Conciliation (civilian).—Schuyler Schieffelin, VI, Capt., 493d Aero Squad., A. E. F.—Charles W. Sherman, I, Sergt., Mass. State Guard, Co. F, 11th Regt. (civilian).—Louis A. Simon, IV, Office of Supervising Architect, Treasury Dept. (civilian).—Frederick W. Swanton, VI, Pvt., National Capital Volunteer Guard, Examiner U. S. Patent Office, Washington, D. C., (civilian). Henry M. Waite, I, Lieut.-Col., Director-General Trans., A. E. F.—Elton D. Walker, I, Capt., 15th U. S. Engrs., A. E. F.—Henry W. Whitman, Food Comm. of Newton Centre, Mass., Public Safety Comm., Liberty Loan Speaker, Bureau of Information (civilian).

At the annual alumni gathering, held at the Walker Memorial, Saturday evening, March 1, sixteen of the class of '90 were present, as follows: Sherman, Collins, Gilmore, Bartlett, Batchelder, Borden, Brownell, Burley, DeWolf, Goodwin, Kendall, Rogers, Royce, Tilson, Whiting, and Boss.

All certainly enjoyed themselves, and regret that more could not have been present. A telegram was received during the evening from George E. Hale at Washington, regretting that he could not be with us, and extending his best wishes and continued success to Ninety.

Harry Brownell showed up for the first time in years, as he has been connected with the navy department and away from Boston for more than twenty years. He is now a commander in the Civil Engineering Corps, U. S. Navy, located at Portsmouth, N. H. Harry's son is a lieutenant-commander, in charge of a division of five submarines; his son-in-law is a commander in the navy; and his younger son is a cadet at Annapolis.

Charles Hayden has been elected a director of the Cuba Cane Sugar Corporation.

Frederick P. Royce, vice-president of one of the Stone & Webster corporations of Boston, has been appointed general manager for the receiver of the Brooklyn Rapid Transit Company. Mr. Royce took up his new duties January 31. He will take the place of Timothy S. Williams, president of the Brooklyn Rapid Transit Company, who at his own request will be relieved of all responsibility for the administration of the Brooklyn Rapid Transit Company on January 31. His home is at Dedham, Mass.

A movement is on foot to limit competitive bidding in building contracts and, so far as possible, substitute the cost-plus plan under which the government got such tremendous results during the war. One of the prominent advocates of the change is Leonard C. Wason, president of the Aberthaw Construction Company of Boston, former president of the American Concrete Institute, and now a member of the executive committee of the Associated General Contractors of America. Mr. Wason, who speaks from an experience of twenty-five years, during which the Aberthaw Company has executed millions of dollars' worth of work under the cost-plus plan, agrees exactly with General Marshall, chief of the Construction Division of the War Department, who is an avowed champion of the cost-plus plan.

The great lesson of this war on the subject of relationship between the contractor and owner is the cost-plus contract. This represents the only equitable basis under which a contractor may perform constructive and economic service for the owner. It is the only form of contract which affords protection to both parties. To me all the energies, thoughts and the experience of this country within its own continental lines during the past year and a half of this world's struggle shall have been in vain unless out of it shall grow, as a permanent institution solidifying the economic relationship between the contractor and the owner, the cost-plus contract.

LIEUTENANT RICHMOND YOUNG
Died October 10, 1918, at Fleuy-sur-Aire, France

1891

HENRY A. FISKE, Secretary,

Care General Fire Extinguisher Company, 275 West Exchange Street, Providence, R. I.

Gardiner F. Wells, who has been until now manager of the division of transportation of the United States Housing Corporation, has resigned to enter the consulting engineering field, paying particular attention to public utilities. From 1901 to 1916 he was with Stone & Webster. Since March, 1916 he has been head of the corporation bond-buying department of Arthur Perry & Co., Boston, and during the war period served first as major in the Ordnance Department of the army and later on the staff of Otto M. Eidlitz head of the government Bureau of Industrial Housing and Transporation.

"Will" Wilder was recently made one of the board of governors of the American Dyes Institute, which is the representative organization of America's newly established dyestuff and intermediate industries.

Arthur Hatch says that he is still busy dredging and improving the Providence water front. As he puts it—prohibition and " dry " docks go hand in hand.

A letter from Bert Kimball reads as follows:

> While in Washington for a few days early in January I attended a dinner given by the officers of the Nitrate Division, Ordnance Department. Besides the commanding officer of the division the chief of ordnance and many civilian experts were present. It was in a way the breaking up of many pleasant associations and the remarks that followed the dinner were, naturally, a sort of a review of the work of the division.
>
> When hostilities closed two plants were ready to manufacture and two more in process of erection.
>
> Ammonium nitrate is now being made synthetically, the nitrogen being obtained from the atmosphere. As ammonium nitrate is an explosive and a fertilizer, it would seem desirable to continue the manufacture.

Ernest Tappan is still in France working in a Young Men's Christian Association foyer, and does not expect to return for some time, as helpers are still needed " over there."

The sympathy of the class is extended to Stephen Bowen, whose wife (nee Pratt) passed on December 23, 1918.

Miss Mary Frances Fiske, eldest daughter of Henry A. Fiske, is to be married May 10 to Mr. Kingman Packard Cass of Tilton, N. H. During the war Mr. Cass was a lieutenant in the United States Army, Quartermaster's Division. He is a graduate of Wesleyan University.

Maj. Woodruff Leeming writes that he has just returned to Paris from Italy where he has been estimating damages for the Peace Commission.

Will Fuller's son is a lieutenant in the Ordnance Department and still in France. —Maj. Jere Campbell is at Les Sables d'Olonne, France.

The class of '91 extends its sympathy to Harry H. Young on the death of his son, Richmond, who made the supreme sacrifice in France, that right and not might should rule.

Lieut. Richmond Young was graduated at Harvard in the class of '16. He was twenty-four years of age. He received his commission as first lieutenant at Plattsburg in 1917 and was assigned to Co. C, 304th Infantry at Camp Devens. On July 8 he sailed with the 76th Division and after arriving in France was transferred to the Sunset Division, 163d Infantry. In September, 1918, he was transferred to Co. K, 38th Infantry, 3d Division, composed of regulars and went to the front in the

Argonne drive. He was wounded October 9 in taking Romagne, a little town between the Argonne and the Meuse, and died October 10 at Fleury-sur-Aire, where he was buried in a French cemetery with full military honors.

1892

George H. Ingraham, Secretary, 2040 East 107th Street, Cleveland, Ohio
Charles H. Chase, Assistant Secretary, Tufts College, Mass.

Major Williams, who went over to France in August, 1917, has been connected with the transportation service as division superintendent and commanding officer of the 64th Engineers and 53d R. T. C. Since December, 1918, he has been a member of the Inter-allied Railway Commission in full charge of all German railways on the American front. Address: R. T. C., N. A., U. S. P. O. 713, A. E. F.

Secretary Wilson has appointed L. K. Sherman, now chief engineer of the housing corporation, director of the Bureau of Industrial Housing and Transportation, United States Department of Labor.

As reported in "Science" January 31, Leonard Metcalf was recently elected vice-president of the American Society of Civil Engineers.

The following changes in address have been forwarded to me: H. S. Miller, 1037 East Jersey Street, Elizabeth, N. J.; Prof. H. R. Moody, College of the City of New York, Convent Avenue and 140th Street, New York City; Eugene S. Pettee, 79 Milk Street, Boston, Mass.; Capt. John W. Hall, Adjutant Army Service Corps, A. P. O. 712, A. E. F.

1894

Samuel C. Prescott, Secretary, M. I. T., Cambridge

With the end of the war it will be of very great interest to learn how many of the members of the class have been engaged in war service either directly or indirectly. Probably the number of those so occupied will be very much greater than is suspected, as many men working in a civilian capacity have been carrying on work of enormous value to the government.

Guy Lowell deserves special mention for the wonderful work carried out under his supervision for the Red Cross in Italy. This has received specially favorable comment through the press and Lowell has been the recipient of the War Cross and other decorations from the Italian government in acknowledgment of the service he has rendered. A special account of some of the experiences of Lowell was published in the "Transcript" about March 8 and is specially interesting reading for those who are acquainted with the man.

Another man who has been particularly active in service for our allies is M. S. Chace. Chace went to France and joined the French Artillery in August of 1914, but was later sent back on orders from General Mangin to be a member of the French Artillery Commission and later of the French High Commission in charge of inspection and to assist in the purchase of artillery supplies and marine engineering supplies for the French navy. Chace has been located in this country therefore for most of the war, while his desires have been to be at the front in the service of the French government. He had a very responsible position in this country and maintains an office at 518 Book Building, Detroit. In recognition of his service and devotion he has been made Chevalier of the Legion of Honor, the recommendation for this honor having been made by M. Andre Tardieu. Chace's work for the French government will probably keep him busy for about two or three months more, but he hopes to be through in time for the twenty-fifth reunion of the class in June.

George Tabor has been engaged in the Ordnance Bureau at Washington in the Procurement Division and has rendered a service of incalculable value in this connection. While working as a civilian, Tabor has had a very responsible position and the flow of supplies of a certain kind to the army has been directly under his supervision. Tabor wrote a poem last summer for the periodical published by the Ordnance Department.

Tenney was for many months engaged in the problem of securing toluol from gas plants for use of the army in making explosives and in this connection spent a great deal of time in New York and Washington.

Piper joined the forces of the Quartermaster's Department in a civilian capacity and had charge of the purchase of the rubber footwear for the army, a position for which his long experience had admirably trained him. There is no question that his expert knowledge of values and of the processes of rubber boot making was the means of saving the government many millions of dollars.

Weil, whom the secretary had not seen for over twenty years, was discovered working in the Ordnance Department with the rank of captain.

Tracey has been connected with the Construction Quartermaster's Department in a civilian capacity for over a year.

R. S. Weston has been serving as engineer for the Housing Corporation and the Emergency Fleet Corporation. His title was project engineer and his work has been especially concerned with baths and housing.

Phelan was engaged on experimental work in connection with the Chemical Warfare Service, this work being carried out at the Institute. At the present time, in addition to his teaching at the Institute, Phelan is giving a course on Industrial Chemistry to seniors and graduate students at Harvard.

Scott has gone into the metal business and is now connected with J. H. Higgins, 198 Globe Street, Providence, R. I.

W. H. Pratt is still connected with the General Electric Company at their Lynn plant. Pratt has a son in the sophomore class at the Institute.

The work of C. G. Abbot continues to receive especially favorable comment. The following mention of his work recently appeared in "Science":

> Dr. Charles Greeley Abbot has been appointed assistant secretary of the Smithsonian Institution. Dr. Abbot was born in Wilton, N. H., May 31, 1872. He was graduated from the Massachusetts Institute of Technology, class of 1895, with the degree of Master of Science, and in 1914 he was awarded the Honorary Degree of Doctor of Science by the University of Melbourne.
>
> Dr. Abbot was appointed assistant to Secretary Langley in the Smithsonian Astrophysical Observatory in 1895, and has been engaged continuously in original researches on solar radiation in co-operation with Dr. Langley up to 1906, when he assumed entire charge of that work as director. His studies covered the fundamental problems in connection with the amount and variability of solar radiation, its absorption in the solar and terrestrial gaseous envelopes, and the effects of its variability on climate.
>
> In recognition of the character of his work, Dr. Abbot has received the Draper gold medal from the National Academy of Sciences, the Rumford gold medal from the American Academy of Arts and Sciences, and membership in the National

Academy of Sciences, the American Academy of Arts and Sciences, the Astronomical and Astrophysical Society of America, the Royal Astronomical Society of Great Britain, the Societe Astronomique de France, the Society of Astronomy in Mexico, the Academy of Modena in Italy, the Deutsche Meteorologische Gesellschaft in Germany, and other organizations. The results of his work have been published largely in the Annals of the Astrophysical Observatory. He is also the author of a work entitled, "The Sun," published in 1911, and has contributed many scientific papers to special astronomical and astrophysical journals.

A. G. Zimmerman has left Chicago and is now located at 85 9th Avenue, New York City.

The secretary rejoices to announce that he is once more a free man, having been discharged from the army on March 20. He hopes that hereafter he will have opportunity to attend more scrupulously to the duties of the class secretary and that the pages of the Review may not be so barren of '94 notes. As a part of his work in the army he made an investigation of dehydrated foods for army supplies. As a result of this investigation the Secretary of Agriculture requested his detail to the Bureau of Chemistry to take charge of the newly created Division of Dehydration and to administer the special appropriation of Congress for this purpose. This work is still going on and as a result the secretary is commuting between Washington and Boston every week. The work is of much interest and it is hoped it will result in the establishment of the new industry of dehydration on a firm commercial basis. Another honor which has come to the secretary since the last report is the presidency of the Society of American Bacteriologists, while more recently, selection by the Executive Committee of the Society to serve as a representative on the National Research Council.

Special attention is requested at this time to the fact that this is our twenty-fifth anniversary and that it is fitting and desirable that we should have a large and enthusiastic reunion in honor of the event. Already much interest has been manifested and Tufts has been kind enough to suggest that if it would be possible to have our reunion at Pinehurst, he could place at our disposal his many agencies of entertainment. Discussion of the matter with a number of the class seems to bring out the fact that it is impossible to have our reunion before the Pinehurst season ends and that it would probably be more desirable to have it at some place in New England in June. It is the intention of the secretary to send out a circular letter on this matter within a short time, asking for suggestions and also bringing up certain other matters which have come to his attention from different members of the class. The important thing is for all members of the class to bear in mind that this is a reunion year and to count so far as possible upon being present when the affair is consummated. We should be glad to have suggestions as to the place and the time, whether it should be at the seashore or inland, in the vicinity of Boston or nearer New York, Philadelphia and the West. As there are probably some who have never seen the new buildings, it is perhaps desirable to have the meeting at such a place that a portion of a day might be spent in a personally conducted tour about the new buildings. This, however, is not an essential and the secretary and the local committee will gladly co-operate with those from distant points to make this the greatest reunion in the history of the class. Mark on your calendar against June "Class Reunion" and be on the lookout for special notices at any time for the next two months.

1895

WALLACE C. BRACKETT, Secretary, 105 Washington Street, Boston, Mass.

A meeting of the class was held at the Boston City Club on the evening of February 18, 1919, with an attendance of sixteen,—Barrows, Brackett, Booth, Chase, Conant, "Gus" Clapp, "Andy" Fuller, Hurd, Hannah, Meserve, W. D. Parker, R. K. Sheppard, W. S. Williams, Roger Williams and Winkley. A most enjoyable evening was spent, thanks to Meserve, Major in the Coast Artillery, now stationed at Fort Banks and recently returned from France where he served with the 60th Coast Artillery. His description of his experiences in the service both here and "over there" was most interesting. This is his first appearance at a '95 class dinner since his graduation.

In the absence of "Charlie" Parker, the class president who is now in the South recovering from a breakdown due to overwork, Winthrop Parker, the secretary, announced as a result of the letter ballot for class officers the election of T. B. Booth as president and W. C. Brackett as secretary.

To those of the class who appreciated the paragraph in the recent class letter relating to dues and sent in their checks, the secretary sends thanks. Those who overlooked or forgot this item he wishes to remind that the dues are from $1.00 up to any amount you choose to send, and that just because you forgot before is a good reason why you should not forget now. Send in these dues—we need the money.

At the annual dinner of the Alumni Association held at the Walker Memorial the following '95 men were present: Hannah, W. D. Parker, "Gus" Clapp, Meserve, Whorf, Roger Williams, W. S. Williams, Booth and Brackett. Among the members of Class 1918 who were admitted to the Alumni Association at this meeting was the son of Whorf, '95.

The secretary regrets to announce the death of Horace Kibbe Turner, son of Rudolphus Turner and Ella Kibbe Turner. He was born in Quincy, Ill., December 9, 1872, and attended the Massachusetts Institute of Technology with the class of 1895. He was a successful producer of art subjects for schools and colleges. He died at South Wellfleet June 9, 1918.—John H. Gregory writes us that his address is now care Johns Hopkins University, Homewood, Baltimore, Md —F. T. Miller is engaged in government work in connection with the United States Department of Labor, Information and Education Service.—E. F. Badger is chemist in charge of the new Experimental Station of the city of Milwaukee, Wis., on the purification of water with special reference to the water of the Great Lakes.—Walter W. Reed is now with the Bureau of Yards and Docks, Navy Department, 1328 Randolph Street, N. W., Washington, D. C.—Huxley has again left for Europe.

Tillinghast writes he received his discharge as colonel in the Coast Artillery January 25, and is now in Porto Rico for a month, but will soon be back with the Textile Finishing Machinery Company, Providence, R. I.

Be on the lookout for a communication from the new class officers and please send in all information asked for promptly. We hope to be able to arrange for an informal outing for the class this spring, if possible. It is to be held at some place which would be easily accessible to Boston and New York. If it is found to be feasible further information regarding same will be sent all members.

1896

Charles E. Locke, Secretary, M. I. T., Cambridge, Mass.

Papers report that the 44th Base Hospital, which is Rockwell's unit, has been ordered for early convoy home and, therefore, John should be back to the States some time this spring. At the time of writing this (March 20) Mrs. Rockwell reports that her last letter from John, dated February 22, said that he was still at the hospital, but that they were told on January 31 to be prepared to leave at any time and since that date they have been practically marking time, and waiting for orders to move, although John did get a two weeks' leave of absence and made a very enjoyable trip to Rheims, Nice and Monte Carlo.

P. W. Litchfield, vice-president and factory manager of the Goodyear Tire and Rubber Company of Akron, Ohio, has returned from Europe after having spent two months abroad. Mr. Litchfield, together with Ralph Upson, the Goodyear balloon expert, and Clifford Slusser, the efficiency manager of the Goodyear factories at Akron, formed the civilian part of a military committee sent to Europe by the Navy Department to study airship conditions in the allied countries at the time of the signing of the armistice.

This duty took the Goodyear officials to England, France and Italy, where they visited and inspected every construction plant, balloon factory and flying field in those countries and gathered extensive data which has been incorporated into a report that has just been submitted to the Navy Department, together with various recommendations and observations on the future of the government's airship policy.

The Goodyear factories at Akron manufactured considerably over half of the balloons of all descriptions which were used by the government during the war, and Mr. Litchfield says that he found the Goodyear products in the front ranks of the aircraft in use abroad.

During his visit in Europe Mr. Litchfield was also authorized by the War Industries Board at Washington to make a study of the performance, operation, and repair work on automobile tires in foreign countries. The report which the Goodyear officials submitted on these subjects will be used by the government in analyzing tire conditions as related to the military service.

Leighton has been recently chosen chairman of the newly formed National Service Committee of the Engineering Council. The " Engineering News Record " of January 30 refers to this appointment as follows:

> M. O. Leighton, consulting engineer, Washington, D. C., has made a particular study of hydro-electric development in this country. He testified before the Congressional Committee on the possible commercial development of navigable rivers and streams in forest preserves, indicating also to what extent canalization of navigable streams would result in improvements to navigation as well as in water-power possibilities. He has made a study of the application of water-power to many uses, including industry, central stations, and electro-chemistry and especially to railroad electrification. Mr. Leighton was born in 1874 and was graduated from the Massachusetts Institute of Technology in 1896. He engaged chiefly in hydraulic work, and in 1906 was appointed chief hydrographer of the Geological Survey. He continued in this office until 1913, when he took up consulting work. He has been a member of a number of government commissions to study waterways.

The secretary grieves to report the death of Harry P. C. Browne. The report came from Charley Lawrence who paid a splendid tribute to Browne, as evidenced by the following letter:

It is my painful duty to advise you that our good friend and classmate, H. P. C Browne, of Houston, departed this life on December 30 last at his Houston residence.

Browne did not marry until very recently, i. e., April, 1917, when he was married to Miss Doris Young of Houston, who survives him.

Browne was not particularly well known to his classmates, but to those to whom he was better known in later life he revealed a remarkable and admirable character. His brain was of the analytical type, which made his opinions extremely valuable. In his chosen field of endeavor, he had no superiors; his energies being devoted particularly to developing instruments for measuring with high degree of precision, distance traveled by motor driven vehicles, which business had reached a point where he was netting excellent returns, when he was cut off.

Browne was respected most highly by all business men with whom he came in contact because of his versatility and accuracy of conclusion after he had given careful consideration to a subject. In patent law his opinion was respected even by those who made this line of work their specialty, and he was asked by one of the leading firms of this country to take a position with them so as to examine all claims which they made on patents presented to them for filing.

In the opinion of the writer, Browne was one of the shining lights of the Class of '96, though his extreme modesty kept him from pushing himself at times where he may have made a more remarkable showing. To sum it all up, he may have been called a true Christian gentlemen, and those of us who knew him best feel keenly his loss.

It was the secretary's pleasure to have known Browne somewhat intimately during his course at Technology and to have realized his fine points.

The other Harry Brown still remains to us, although, as reported in past Reviews, he went through a long and dangerous illness a year or more ago.

At the alumni dinner in the Walker Memorial, on March 1, the following '96 men turned up: W. T. Dorrance, L. E. Emerson, H. G. Grush, H. W. Hayward; C. E. Locke, A. D. MacLachlan, M. O. Priest, E. H. Robinson, and S. F. Wise. Also Harry Jackson was present but sat with '97. Dorrance made the trip all the way from New Haven where he is still with the New York, New Haven and Hartford Railroad. It was also a pleasure to see Priest, who has been a very infrequent attendant. He has an additional tie to Technology now, in that his son, who graduated from the Mechanical Engineering Department, is now an assistant in that department.

Miss Elizabeth Fisher, professor of Geology at Wellesley, has this year given two courses in connection with the Lowell Institute, one a course in the Teachers' School of Science, on " Geographical Influences on the Division of Europe," and the other a collegiate extension course on " Natural Resources and Their Conservation."

Another one of our classmates passed away last summer, although word did not reach the secretary until January. This was Fred W. Smyser, one of the four Smyser brothers of '96. We all remember Fred for his earnestness, which he showed even as a student. His death occurred at Harwich Center, Mass., on Wednesday, August 27, 1918, and the following is taken from the Harwich " Independent " of September 4:

This community was startled and saddened when it heard of the sudden death of Mr. Frederick W. Smyser, on Wednesday noon last, at the home of his mother, Mrs. C. F. Smyser. The last call came without warning while he was walking about his mother's estate, although his health for a long time indicated the possibility of a sudden collapse. He had been here a number of weeks in an effort to improve.

Mr. Smyser was forty-nine years of age, a graduate of the Massachusetts Institute of Technology in June, 1896. He has since been engaged in work of great responsibility for the government, and his ceaseless energy and conscientious faithfulness to duty resulted in a break-down in health.

He first taught mathematics on the training ship "Enterprise" for two years, and gave one year as instructor in mechanical drawing at the Columbus, Ohio, University.

During his connection with the United States steel plant at Duquesne, Pa., it was the strain of the arduous duties in superintending the running of the seven great engines under a necessarily defective system, to keep the blast furnace in operation, that first undermined his health.

He was in the employ of the General Electric Company at Schenectady, N. Y., for some time, and then became a member of the staff of the National Board of Fire Underwriters, and at the time of his death was the assistant general manager, having risen to that high position by merit and strict application to duty.

Mr. Smyser was held in the highest esteem by his business associates and throughout his illness they gave repeated evidence of their great regard for him. He was a man of very pleasant personality and beloved by all with whom he came in contact, who now deeply deplore his untimely passing.

His death, due to angina pectoris, from which he had directly suffered for three months, leaves a gap in the devoted family circle never to be filled. The community is a unit in sympathy with the bereaved ones. Deceased leaves a wife and one son, Mr. Fred Hawley Smyser, a student at Technology, in Electrical Engineering.

The funeral was from his mother's home, at eleven A.M., Saturday, and private. Rev. George W. Clark officiated. Burial was in Island Pond Cemetery, at which the Masonic rites were performed by Pilgrim Lodge of Harwich.

Joe Harrington has been heard from and reports for himself that he has changed his position and is now with the James A. Brady Foundry Company, at 45th Street and Western Boulevard, Chicago, Ill. Classmates will remember Joe has made a specialty of boilers, particularly the stoking of boilers. Perhaps the following account Joe's own words will tell the story better than the secretary can:

For about a year I was administrative engineer for the Fuel Administration for the State of Illinois, having in charge the conservation of coal in the thirteen thousand or more power plants of the state. This work we organized along very systematic lines, and I think our intensive propaganda resulted in the saving of many thousands of tons of coal. At any rate, there is a greater interest in fuel conservation in the middle west than ever before, and for the first time power plant owners and operators are taking real interest in conservation matters and spending money that more money may be saved.

About a year ago I gave up my private consulting practice in the operation and efficiency of steam power plants on account of its being too strenuous. I was, perhaps, too successful, and on account of its being a strictly personal service, I was at work all the time. For the sake of my health I gave it up and made a very favorable connection with one of the finest foundries in the middle west—the James A. Brady Foundry Company. I am the vice-president and chief engineer of this organization, having particular interest in the manufacture of engineering power plant equipment which we make. This consists of several types of stokers, coal and ash-handling machinery, and automatic coal scales.

We are one of the few concerns that are busy, and the outlook at present is for an extraordinarily heavy season.

I have served on quite a number of special commissions pertaining to the adjustment of large contracts, and have done an endless amount of lecturing and writing in connection with my specialty.

Two '96 majors have forsaken Washington to go back to their old jobs, Major D. M. Bates being again with the Lewiston Bleachery and Dye Works, Lewiston, Me., and Major W. Guy Wall being with the National Motor Vehicle Company, Indianapolis, Ind.

Other changes of address received are as follows:

Mr. Frederick E. Field, Public Works Department, City Hall, Montreal, Canada. —Mr. Myron L. Fuller, Box 1109, Dallas, Texas.—Mr. W. C. Haseltine, care Swartz & Company, New Orleans, La.—Mr. Alfred V. Shaw, 6212 25th Avenue, S. F., Portland, Ore.—Mr. J. W. Stickney, 3311 North Meridian Street, Indianapolis, Ind.

Mrs. Walter Dodd (Helen Chamberlin) East Corinth, Vt., has put out a very tempting price list of maple products from her Twinflower Farm. She and her husband have made a specialty of this for a number of years, and this year have added to their holdings of maple trees to try to supply their increasing custom.

1897

John A. Collins, Jr., Secretary, 67 Thorndyke Street, Lawrence, Mass.

Charles W. Bradlee, Acting Secretary, 54 Canal Street, Boston, Mass.

In answer to an urgent appeal for news about '97 men the following interesting replies have come:

From Providence, R. I., Henry Ballou writes:

> Your invitation to send autoflattery as class news, is to hand. Referring to the dearth of such matter in the past, be assured that we of '97 do not dislike publicity and free advertising, oh no! It is merely that we dread being mistaken for warm air notables. No! This is not an excess of modesty; we await the time when our accomplishments will speak for themselves so loudly (i. e. fetch such a roar), as to be heard from Beantown to Ochotsk.
>
> To date, we are sort of handing it to Spear for his hole under Manhattan; to Atwood for water works; Yale bowls, destroyer plants, etc., to Professors Breed and Hosmer; to Parsons for running the Bureau of Yards and Docks. Say, let the secretary write this! What do we pay him for anyway? However, twenty-two years not having brought complete plaudits of the wide world, it may be that our secretary lacks minor details here and there. So here goes: born, once; married, once; children, same; death, slow, as yet.
>
> By the grace of a very able partner named Jenks, it is allowed that Jenks & Ballou, in twenty years, have done a muchness of engineering work for industrial enterprises, public service corporations, cities, towns, benighted individuals and lawyers. The number of these jobs is alleged to total above 1,800; and the cost (goodness knows what the value may be), sundry millions. Power plants seem to dominate the composite, to the number of over a hundred.
>
> Ruminating on the whole, it is felt that engineering is an exact science, being especially exacting as regards knowledge of human nature.
>
> Wherefore, having thus grudgingly loosened up, I would hail: What Ho! Ye long suffering, hard-working veterans of '97 (for veterans you have perforce become) stand forth and acknowledge that for a score of years you have worked like dogs; yes, worked the very thatches off your beans. Stand forth and tell your classmates a word or two about it. Yours is a creditable record, and we will brag about it to every gink we meet.
>
> In the words of our Bradlee — paraphrased — don't be so darn modest; twenty years have passed, — speak up now and let the rest of us hear of you before the flu gets us all.

George Wadleigh from Webster Groves, Mo., under date of March 9, sends the following:

> While sending you check for this year's dues, I am going to get out of my system a "kick," concerning the lack of '97 news in the Technology REVIEW. I realize that like the rest of us, you are a very busy man and the job of Class Secretary can be quite a burden. It was with the idea of helping you that an Executive Committee was formed. If you lived a thousand miles from Tech headquarters you would appreciate more what class news means and that I have a real complaint to register.
>
> I know that you have a good comeback; that no one sends in news. Well here is my "bit," unfortunately personal. I was fortunate enough to have the opportunity of serving the Emergency Fleet Corporation as District Supply Manager

for the most of last year, helping to get our merchant fleet out. It was strenuous work and if I had not enlisted Feeley, who gave up his work in Chicago at much sacrifice, should not have made as much of a success of the work as we did. Feeley has now returned to his company; M. D. Knowlton and I have returned to Bemis Brothers Bag Co.

There were a lot of Tech men in Fleet work. Hope their part will be written up some day.

Henry Jackson, now with Monks & Johnson, architects and engineers, at 99 Chauncy Street, Boston, sends an interesting account of his work:

In September, 1917, I was asked by Monks & Johnson to take charge for them of the layout for heating, lighting, plumbing, etc., for the temporary buildings at the Chelsea Naval Hospital in Chelsea, Mass. As this was a " rush job," and men were hard to get, it made quite a pretty piece of work to get this thing through in the three weeks that were allotted to us. We had to entirely re-model their Power Plant, removing one boiler and installing two, also an entire new unit for forced circulation of hot water—the water to be supplied to two groups of buildings, one on the top of the hill near the present hospital, and the other to a lower portion over near the New England Coal and Coke Company's plant, that is just across the Creek from them. Each group consisted of ten wards with barracks and mess house.

We also had to install a complete sewerage handling outfit for the lower group, consisting of an electrically driven pump set in a concrete pump, discharging to the Chelsea sewer. The drawing and the layout were comparatively easy, but the writing of the specifications along the lines of government specifications was some job. If you have never tackled writing a specification along government lines and want something to do that will make you tear your hair, try one of these.

This job off my hands, I expected to get back to the old stand, but I was asked to assist in the development of the plans for a shipyard, taking care first of the compressed air outfit. I wrote up a set of brief specifications for electrically driven compressors, and also laid out roughly the plans for the air lines. This plant developed into the Squantum Destroyer Plant.

This work kept us busy until June of 1918, and when I say busy, I mean just what I say. It was busy days, nights, holidays and Sundays. There was no letup, and no chance to make changes. The plans had to be right the first time, or they were wrong forever.

In June, we were authorized to go ahead with the work of designing a large shipyard on the Pacific Coast for Bethlehem Shipbuilding Corporation — this yard was to have been very much larger than Squantum, and was to include a great deal more than Squantum. It included not only the plant for fabricating the ships, but also brass foundry, the steel and iron foundries for making the castings for these vessels.

We had a large boiler plant to design and construct, two large sub-stations with air compressors, rotary transformers, etc., and miles upon miles of compressed air piping, steam piping, water piping, electric conduits, etc., to lay out and write specifications for. It was another case of hustle, and another case of pure enjoyment in spite of the many drawbacks incident to government work.

Some time in October, the Emergency Fleet Corporation cancelled the contract for building the ships which were to have been built at the West Coast plant, and, therefore, our contract for the design of the plant was also cancelled.

While this work was going on Monks & Johnson made a proposition to me to take over the electrical and mechanical work of their office, and I accepted, so that I am now, I trust, permanently located with them at 99 Chauncy Street, Boston, where we retain the better part of the organization we built up for the supervision of the big jobs, and are ready to serve any one in an engineering capacity along almost any line.

Rodolphus Swan, whose address is 80 Walnut Street, New Bedford, Mass.; writes:

Since July 29, 1917, I have been doing nothing more exciting than endeavoring to keep up with the rulings of the Provost Marshal General, one Enoch Herbert Crowder, address Washington, D. C., with relation to the Selective Service Law.

In other words I have been trying to keep a draft board out of Leavenworth and to keep a steady stream of selected men going to training camps, perhaps the most interesting work that ever fell to the lot of any American citizen. It was, I assure you, no vacation, but a long steady grind, with hours beginning as soon as one could pry his eyes open and swallow breakfast, and continuing as long as his eyes would stay open, no Sundays or holidays appearing in red on the war department calendar.

Outside of that, I am still doing newspaper work with "The Morning Mercury," and distributing liquor licenses for the city of New Bedford, a task that promises to be over soon. My family status remains the same, one wife, two hopefuls, a pitcher and a catcher, a perfectly good IV A claim, as it is called in the vernacular of the draft. I have played at golf only three times since the draft got me, but I propose to limber up this spring.

No Tech man ought to pass through New Bedford without having a peek at the Jonathan Bourne Memorial, a building located on top of Johnnycake Hill, within which is housed a half-sized whaleship, the "Lagoda." It is well worth seeing and it will soon be about the only typical whaler in existence. Therefore, '97, when you come towards New Bedford, see me and the whaler, if nothing else.

From G. F. Starbuck comes the following modest contribution:

For over twenty years it has been my hope, and the object of my endeavor, to accomplish something that I would be justified in bragging about, but I have not succeeded yet. The nearest approaches have been two inventions of mine which are placed on the market by the Franklin Railway Supply Co., the Radial Tender Buffers which were supplied to all the United States government locomotives and to locomotives shipped to Russia; and the Articulated Tender Trucks, which are being introduced onto several railroads. Use this if '97 class news is so lacking that this is required for killing space.

Mrs. Heard sends the following items of interest about her husband, Henry Heard:

I am writing in answer to the letter to my husband about the class of '97, M. I. T. Mr. Heard enlisted as a seaman, U. S. N. R. F., was called on April 11, and was sent to Eastern Yacht Club, Marblehead, where he trained ten days, was then assigned to yacht "Walay" where he staid till December. Then took examinations for ensign and after receiving his commission was immediately ordered to London, sailing in January, 1918. He has been working at the United States Naval Headquarters, 30 Grosvenor Gardens ever since and is still there and does not know when he will be back but he thinks this month.

A. S. Hamilton has recently changed his address to 19 Liberty Street, New York City. He writes, "no change in business, which is Workingman's Compensation and Liability Insurance, family the same size, three children."

Allen W. Jackson was a special representative of Civilian Personnel Division of Ordnance Department, during 1918, then representative for injured soldiers, Cambridge Red Cross, was about to sail for Switzerland in Red Cross Commission at signing of armistice.

L. S. Cowles, I, was reelected secretary of the Engineers Club of Boston at the last annual meeting of the Club. Cowles started the movement for an engineers club in Boston in 1908 which culminated in the opening of the present clubhouse at the corner of Arlington Street and Commonwealth Avenue on January 25, 1913. The club has about nine hundred and twenty-five members at the present time and is an important feature in the engineering life of Boston and New England. Charles T. Main, '76, is president and Frederic H. Fay ,'93, is treasurer.

H. A. Noble writes:

I am doing it now. Am sorry I have nothing of interest to report. Just digging away as usual.

A. L. Parsons, I, is stationed at the Navy Yard, Philadelphia, as Commander of Civil Engineer Corps, U. S. N.

William Cotter is now associated as general superintendent with the J. J. Prindeville Co., General Contractors, of Framingham and Boston.

Edgar Hawkins' sole interest in the class notes lies in hearing about the others, witness the following:

> I am going to suggest that you make both Frank Feeley and George Wadleigh tell us all of their work on the Emergency Fleet Corporation at St. Louis during this past year.

Edward A. Sumner writes from Pasadena, Cal.

> One feels that war service is about the only news fit to print nowadays and I was knocked out by pneumonia trying to change captain in the Quartermaster Reserve into a cavalry commission, so have nothing to report. I was recently put on the board of directors of the American Radiator Company, which I would be willing to shout about if I had done some Hun hunting, too.
>
> Keep up the good work, for we all like to hear about the other fellows.

From O. B. Smith at Vancouver, B. C.:

> I did not go to war— for one reason I was too old, and for another reason, I still have the bum leg which kept me from receiving the wonderful military training which was given at Massachusetts Institute of Technology in the year '93. I have, however, been helping more or less in a financial way, and inasmuch as an American living in British Columbia has his income taxed by the Province, the Dominion, and the United States, it would look as though I would be of financial aid to the governments for some years to come, if I happen to live.
>
> In regard to my family: I have a wife and two children, aged eight and thirteen, all of which has been reported before.
>
> We have another Tech man working with us, Howard MacDonald, '07. Aside from Mr. MacDonald and myself, the Tech men in this part of the country are very scarce.
>
> The Granby Company has properties at Valdez, Alaska; Ketchikan, Alaska; Anyox, B. C.; and Phoenix, B. C., and inasmuch as I have to give these properties the look over every so often, I manage to be away from Vancouver the greater part of the year; however, my headquarters are at Vancouver, and will be for some time.

Col. William A. Kent writes from Knoxville, Tenn., where he is Army Recruiting Officer:

> I was among the unlucky ones who failed to get across. I was organizing my regiment, the 810th Pioneer Infantry, at Camp Greene, N. C., when the "flu" started, the camp was quarantined for about six weeks and no more men could be received. When the quarantine was lifted the men came, but too late—the armistice was signed before I got them clothed. So they were demobilized December 21, 1918. I had a temporary command for a few weeks, then went to Camp Headquarters as executive officer. I stayed there until February 27 when I went to Knoxville, Tenn., on recruiting duty. I expect to be there for some time. I am out here establishing sub-stations as fast as I can get to the places. Those torrential rains and cloud bursts of the sixteenth put the railroads out of business in this section. The Mississippi and Tennessee Rivers and all of their branches are way up. Day before yesterday we ran through water running like a mill race several inches over the tracks and last night it took us fifty minutes to go nine miles, the second train over that track for four days.

Hugh Moore a few days ago told the Secretary that he had been elected to the National Research Council. He considered same a greater honor than being elected mayor of Boston. He had just returned from Washington, from attending a meeting of the National Research Council, when I saw him.

A. H. Pugh writes from Cincinnati briefly and to the point:

The writer took a position at the Ordnance Department, Cincinnati district, as head of the Loading and Explosive Section and is now assisting the negotiation of the settlement of claims.

Wilfred Bancroft sidesteps the personal question mark, notice the following:

Our genial and highly efficient classmate, Charlie Bradlee, has taken upon himself the duty of gathering class notes for '97, which means that the life of that justly famous class will no longer be " hid under a bushel."

I think you are doing a really worth while piece of work and I will help in any way I can although nothing much happens down here in the country.

John Taylor, consulting engineer with the General Electric Company, writes from Schenectady, N. Y.:

I never mean to throw away a stamped reply envelope. Your communication on yellow paper which you have not taken the trouble to date or place an address on calls attention to lack of '97 Class News in TECHNOLOGY REVIEW.

Of course, plenty of us like to see our name in print but, against this, modesty, reticence and regard for the advertising proprieties deter many from seeking press interviews or feeding " copy " which directs the spotlight in the personal direction.

Replying more specifically to your second paragraph,—

I have taken some indirect part in war activities. My work ever since graduation has at all times been more or less " special." I have been married (once). There have been several increases in the family. I make many trips every year (some short and some longer); and interesting experiences (to me) are almost daily occurrences. There have been several business changes as well as residence changes (none during the preceding year.) No change in business position during the preceding year.

All of these things might be of interest to bring out if chatting with a classmate, but I do not feel that I should send them along with the idea to increase the consumption of paper.

From Franklin Bragg, Bangor, Me.:

I, of course, have done my part in the war and have been busy in various matters. I have hesitated to send the information in, however, as I am rather modest about such things and did not want to appear as blowing my own horn. If it would be of interest to the rest of the class I am pleased to state that I have been elected a Director of the Chamber of Commerce which took a very active interest in all war activities. I also handled the county for the United War Work Campaign and we went over our quota with a very large percentage.

I also belong to the Rotary Club and have the pleasure of being Chairman of the Entertainment Committee.

James G. Moran writes:

Nothing of much importance has transpired in my life during the past year. I will say, however, that I am now a member of the Massachusetts Legislature and I am serving my third term. I am serving as a member of the Joint Judiciary, which is an important committee in the Legislature.

From Harrison Smith and Breed:

Both stayed with the Ground Schools at Tech until they were disbanded. Smith was president of the Academic Board of the Navy School and Breed held the same position in the Army School. The Navy School enrolled 4911 Cadets and graduated to the flying schools 3949. The Army School enrolled 1178 Cadets and graduated to the flying schools 618. The Army School also enrolled 975 officers and privates and graduated 695 as engineer officers.

There were but two other Navy Ground Schools in the country. The one at

Tech was by far the largest. There were seven other Army Ground Schools, but the Engineer Officers' School at Tech was the only one in the country.

Harrison Smith has succumbed to the call of the wilds again and is traveling in the South. He intends to visit the Tropics before returning to civilization next spring.

Walter Humphreys has just been re-elected chairman of the Brookline School Committee and secretary of the Board of Trustees of the Brookline library. He has recently resigned as treasurer of the Junior Red Cross Auxiliary of the Boston Metropolitan Chapter

Mrs. Mary B. Strong writes:

> I was only a special student of the class of '97, and so hesitate to reply to your letter, but felt it only courteous to acknowledge it, and tell you my interest is always alive for the M. I. T. My war work was chiefly among the Radio boys of Cambridge, besides the usual work women did in surgical dressings, etc. Within the past year I have become a grandmother, which must make me seem to you quite an elderly lady.

The annual report for 1918 of the E. I. duPont de Nemours and Company makes a very complimentary mention of the work of Irenee duPont as chairman of the Executive Committee, which has been primarily responsible for the success of the work as a whole. The gross business of the company during the war period has amounted to $1,049,000,000, including the cost of construction work. Irenee duPont occupies a position equivalent to that of general manager, though not so named. During the four years, 1915-1918 this Executive Committee has held 334 formal meetings and has acted upon 5760 subjects, of which 3886 were embodied in written reports.

Irenee duPont writes of himself the following:

> Your circular letter referring to the sphinxlike habits of '97 was awaiting me on my return from my trip to Florida, and I hasten to reply, but I have not been married in the last year, nor have I had any additional children, nor have I set the world on fire by any less extraordinary happening.
>
> I am still one cog in the "duPont Machine." You may have heard what that company has accomplished in the war and I would rather be one of a group accomplishing great things, than an individualist getting a good deal of advertising by alone doing things, such as can be done by a man alone.
>
> Is it not that '97 men happen to be group workers, who have recognized that today is a day of co-operation and that it is beneficial to sink your individuality or at least disguise it, in order that the best results be obtained from collective effort? I am not writing this as a defense of '97's silence, nor as a criticism on those who have done extraordinary things and been credited with that accomplishment but only to offer a reasonable theory to explain a phenomenon showing that we '97 men have the true scientific spirit for research.

Walter Spear sends in the following:

> I agree with you that the news from our class has been conspicuous by its almost unfailing absence in the various issues of the Technology Review. I do not, however, blame the men who are busy.
>
> I became interested in the cantonment work first in May, 1917, and in June became Consulting Engineer on the water and sewage disposal layouts at Camp Upton. In October I received a commission as Major in the Quartermaster Corps, and have since been Utilities Officer in charge of the operation of maintenance and utilities in Camp since last summer under the Construction Bureau. During the winter of 1917-1918, I also looked after new construction by contract, and since November 12 have also been Constructing Quartermaster on this project. My family has been with me in Camp since February 18 and my permanent address for the present, at least, is Camp Upton, although I hope to get out this spring. In a month or two I hope my residence address will find me at Merrick, N. Y.

D. H. Witherby has sent in the news of the death on February 23, 1919, of Edwin C. Witherby.

J. W. Smith writes:

> For the last three years have been general superintendent of the Gray & Davis Co., Inc., Cambridge, Mass., which did a large amount of munition work—first for the Russians—later for the United States. After the war was over on January first I resigned, and up to date have not connected up with any new proposition.

From 15 East 48th Street, New York City, under date of March 17, Warren Brown sends the following:

> From October 30, 1917, until December 19, 1918, I was a captain in the Air Service (Aeronautics)—originally the Aviation Section of the Signal Corps. After being ordered to active duty I first was put through the rather strenuous course of the School for Adjutants at the Ohio State University, Columbus, Ohio, and was then ordered to Taylor Field, Montgomery, Ala.
>
> This was one of the thirty-odd flying fields for the training of pilots, etc. I spent six months at Taylor Field as Post Adjutant and later Executive Officer, and in September, 1918, was ordered to Garden City, New York, for duty as Adjutant of the 344th Aero Squadron one of the big Hawley-Page bombing squadrons then being organized. The armistice was signed just as we were ready to go overseas, the squadron was disbanded and I was honorably discharged on December 19, 1918,

Hugh K. Moore writes from the Boston Engineers' Club:

> During the past year I have been on the Chemical Engineering Committee of the Council of National Defence. The duties pertaining to this job took me to many of the chemical centers of this country. At Berlin, N. H., under my direction we furnished more sulphur-monochloride than all the other plants in the United States put together. Sulphur-monochloride is the starting point for mustard. After the armistice I reorganized the laboratory at Berlin. I reappointed Major Richter to be my chief assistant and sent him to the American University to pick the chemists (while the picking was good) which had been collected there by the United States government, so we have more than thirty of the best chemists in the country. Our intention is to make the mills so efficient that when hard times come and orders are few we shall get what orders there are. Have been elected a director of American Institute of Chemical Engineers. Have been urged to run for mayor of Berlin, but refused. Was chosen by the laymen's committee of the Congregational Church in Berlin, N. H., to give a sermon on the subject, "Why the Church Fails to Interest People Enough to Attend." I wrote this in two parts, Causes and Remedy, and gave this in place of the sermon on the morning of February 16, 1900. Have since given it in Gorham and have been asked to give it in Boston. Am now in Boston applying for certain patents on improvements in operation of our mills.

William Binley, Jr., writes:

> The last year was a strenuous one for shipbuilders and I am glad to have had the opportunity of working on some of the war material in the shape of destroyers for the navy as well as merchant ships. In May, 1918, the greater part of the technical staff removed from the Fore River Plant of the Bethlehem Shipbuilding Corporation, at Quincy, Mass., to form a central organization, controlling five shipyards, at Bethlehem, Pa. It was considerable of a job to change an organization in the midst of war activities, and considerable travel was required between Bethlehem and Boston on my part for most of the year. As assistant naval architect of the Bethlehem Shipbuilding Corporation I have supervision of the designs of the naval vessels and troopships building by the corporation. This company turned out more destroyers last year than all the other shipyards in this country combined; the first vessel completed last spring has steamed over 40,000 miles and all of them have given a good account of themselves.
>
> We are all trusting that shipbuilding in this country is coming back to its own and that in the future Course XIII and the naval architects will never have occasion to be considered as among the "non-essentials."

From May until the close of the war, Walter B. Russell held a position as district educational director under the War Department Committee on Education and Special Training of the General Staff, which had charge of the Vocational Training Detachments, later known as Section B of the S. A. T. C. During the first part of the time he was acting field director, with headquarters at Washington, and the latter part of the time he was directly responsible for the schools in Ohio, Indiana and West Virginia.

Arthur Elson is teaching Chemistry, Physics, and Mathematics at the Allen Military School, West Newton.

Thomas R. Weymouth sends us the following:

> I want to write you a note to let you know that I, for one, appreciate the effort you are making to gather news of our class and to stir up an interest in the matter. While many things have occurred in my life during the last year, of vital interest to me, nevertheless I fear that they would not interest the class, but I will look forward with keen anticipation to the news from the rest of the fellows.

1898

A. A. Blanchard, Secretary, M. I. T., Cambridge, Mass.

On the evening of February 13 the ninety-eight men around Boston met at an informal dinner at the University Club. Lansingh and Allyn were with us and we had a mighty thrilling evening listening to their experiences.

Lansingh's war activities cover a wide range. At the outset he served on the Advisory Committee of the Council of National Defense. Soon he started on a special Engineering investigation in the British and French Armies in France. A little later he became director of the Technology Club at Paris. Although this Technology Club in Paris was pioneer in the field of providing a headquarters for college men in foreign service, it was soon imitated and other colleges joined to form the American University Union with which the Tech Club was merged. Lansingh became assistant director and business manager of this larger organization. Lansingh is now back in this country and is works manager of the Metz Co. automobile plant in Waltham which was taken over by the government for building airplanes.

Bob Allyn, major of artillery, was in charge of batteries in the big St. Mihiel offensive and he has probably been under heavier fire than any other '98 man. At one time he was asleep in his headquarters, when he was awakened by the adjutant who stated that heavy shells were dropping around them and they had better get into the bomb proof tunnel. He was too sleepy to take much interest but finally the officer induced him to retreat to cover. The next minute a shell landed in the middle of the building. But anyway, come to the twentieth reunion, one year postponed, and hear Bob and Lansingh tell about it first hand.

The New York men under the chairmanship of Allyn are going to stage this reunion which will take place at New York and the south shore of Connecticut May 29 to June 1.

Clarence Goldsmith is major in the Quartermaster Corps, United States army. He has been connected with the Construction Division of the army since the middle of May, 1917, being advisory engineer on fire protection and also associated as chief assistant with the advisory engineer on water supply on all emergency construction work which has been carried on by the army in the United States and island possessions during the period of the war.

The following interesting item is taken from the Brooklyn "Times" February 6, 1919:

> Clifton W. Wilder, formerly of Flatbush, and now a resident of Garden City has resigned his position of electrical engineer of the Public Service Commission which he has held since 1909, and will join the staff of the New York Edison Company. His successor has not been appointed.
>
> Mr. Wilder has been connected with the Public Service Commission since 1907. Two years later he became an electrical engineer. His duties were extended to include all engineering matters coming before the commission pertaining to the equipment of lines constructed under the dual contract and the elevated lines. During the past seven years the bureau of which he has been head has passed on the plans and purchase of equipment amounting to nearly $100,000,000. He has also had charge of property appraisals of several of the large public utility corporations under the commissioner's jurisdiction. His salary was $7500.
>
> In 1898 Mr. Wilder graduated from Massachusetts Institute of Technology, and engaged in general engineering work in Boston and New York until 1907, when he entered the service of the Public Service Commission as an assistant electrical engineer.

Word has been received of the death of Michael J. Golden, professor and director of the Laboratory of Practical Mechanics at Purdue University, La Fayette, Indiana. Professor Golden attended the Institute 1896-97, studying in Course II, and was classified with '98.

1899

WILLIAM M. CORSE, Secretary, care Ohio Brass Company, Mansfield, Ohio
BENJAMIN S. HINCKLEY, Assistant Secretary, 177 Park St., Newton, Mass.

David C. Churchill, who was for nearly twenty years in India, is now located in Oberlin, Ohio.

Frank F. Fowle writes suggesting the publication of a class book containing portraits of each member of the class and a concise account of his career since leaving the Institute. He adds that this might be something to have ready for our twenty-fifth reunion. Fowle states that he sees Hamilton, Watkins, Gillson and Huse occasionally and they all seem to be prosperous and busy. He is still in charge of the Central Union Telephone Company, as one of the receivers appointed by the State courts in Chicago some years ago.

G. D. Emerson is at present assistant constructing quartermaster at the Boston Army Supply Base, Boston, Mass. Emerson states that when he gets out of the army he is planning a more or less extended trip west.

> Do what you want to with the enclosed check, the only stipulation being that you do not spend it all in one place. Kind of spread it around so it will be put into circulation where it will do the most good. Now, of course, if we were in Germany I would not think of sending such a thing to you. It would need to be a "sinker" because "over there" a "scrap of paper" is de trop (now what the Hell does that mean?) but with us it stands as a "gentlemen agreement" that I have at least the value of one dollar in the keeping of the firm who had the nerve to print such a thing. Of course, it is understood between you and me that the possession of the value of that amount is now relinquished on my part and that of my own free will and without any coercion on your part. I have said to it a fond and lingering "fare-ye-well."
>
> New York, by all means. Headquarters at Coney Island. Month of July. The Fourth comes on Friday—so you can say from the 3d to the 6th (Sunday), and we

can all get home, rather back to the job, on Monday morning. Our money will be all gone by that time and we will have to go.

Think it over. What's that? Class News? Happy is the country which has no History. (Arlo Bates.)

Come again.

E. Hosmer Hammond writes that he has just taken a position with the Dupont Company at the Harrison Works, Philadelphia, Pa. This plant manufactures paints and varnishes.

W. W. Bonns writes, stating that he has completed his graduate work at the Missouri Botanical Garden and is now taking his Ph.D at Washington University. He is now director of the Botanical Research Laboratories of the Eli Lilly & Company, manufacturers of pharmaceutical and biological products.

Arthur B. Foote, who is with the North Star Mines, Grass Valley, Cal., writes the following interesting letter:

> The job of mine superintendent is such a hard one to get away from that I do not believe I can go east to the proposed Class Reunion. I should think it to be a highly desirable plan, nevertheless, and hope the class makes a success of it.
>
> I married nearly six years ago and now have two little girls. It is a very pleasant country here, well covered with pine timber and a perfect climate. Being 2400 feet above the sea, it is not so hot and dry as the valley, at the same time it is not high enough to get much snow and cold weather.
>
> The North Star Mine is a large one, the main incline shaft being now 6300 feet long, with a vertical depth of about 2300 feet. There are plenty of engineering problems connected with the work, and I have never regretted taking the Civil Course rather than the Mining. A mine is constantly outgrowing its plant, so there is construction work going on most of the time, such as new hoisting works and bins, pumps, compressors, mills, etc. In 1915 we equipped one of the shafts with new hoisting engines, headframe and bins, and made the change without even stopping the hoisting for longer than eight hours, maintaining an average of three hundred tons of ore a day throughout the change.
>
> The year 1917 was a bad one for all gold miners, this one included. Everything high in price, and not enough labor to keep the mill going. Furthermore, the managing director of the company, Mr. Hague, enlisted in the O. R. C. and died of pneumonia in France.
>
> Being off on a side-track as I am, I do not see Tech graduates very often. I have run across Conrad Loring once or twice. Last time I saw him he was with one of the big oil companies.

Alexander R. Holliday sends a pamphlet giving an account of his work as assistant fuel administrator for Indiana. Holliday is treasurer of the Publication Service Company. He is also president of the Noblesville Heat, Light and Power Company; president of the Indiana Railways and Light Company; secretary-treasurer of the Oakland Coal Company; treasurer of the National Concrete Company and a director in a number of Indiana's manufacturing organizations. Holliday has been at all times closely identified with the public utility fields.

Thomas P. Robinson writes as follows:

> I think you owe any architect an apology when you ask him what he has been doing for the last year. Most of the architects are dead and some of them are buried and those that are not dead and buried have been working for the government which is an abridgment of personality equal to being dead,—therefore all of the architects are dead Q. E. D.
>
> I myself was in the process of going down into the earth but I discovered a ram hole to the surface and saved myself by crawling up. A certain leather concern had need of being moved from one building to another building and of having the other building altered and equipped for the moving. In the process of supervising this work I learned the following things about leather soles:

All soles are divided into grades, there being as many grades as there are letters in the alphabet and all grades are divided into an average of six kinds. These kinds are called "irons" and the iron is measured as to thickness. Grades or qualities are determined by the thickness and other characteristics of the various kinds of cows,—some of which are steers. We have light cows (and this refers to weight not complexion) medium cows, heavy cows. We have also light steers, medium steers and heavy steers. Steers are mostly from other parts of the country or other countries,—Boston being conservative in the matter of jokes. Soles are also divided in the matter of tannage,—there being hemlock tanned soles, cut tanned soles and a cross between the two which is called something else that I have forgotten.

I hope this will be of interest to any of the class that are thinking of going into the sole business.

Lawrence Addicks spent most of last year abroad. He returned from a trip around the world last fall. He writes that he spent some time in Burma and India for the Burma Corporation. He acted in the capacity of consulting engineer. At the present time he is designing a zinc smelter near Calcutta and a copper refinery to be built in Spain. Addicks says that he spent four months in the war zone, partly on work connected with the Naval Consulting Board and had many experiences including being torpedoed in the Mediterranean.

Frederic Tappan is located with the British Columbia Electric Railway Company, Ltd., of Vancouver, B. C. He writes that he is so busy that he has hardly time to turn around and does not see how he could attend a class reunion this year. He says that he very much wishes that he could be present at a reunion, because men from the Massachusetts Institute of Technology are very hard to find in Vancouver. The last one he saw was Frank Fowle. This was almost seven years ago.

C. Gardner Barry writes from Sandwich, Mass., that since September, 1917, he has been working on the Cape Cod Canal after a lapse of three years. At present he is wondering what will happen after the government purchases the property.

Burt R. Rickards is now assistant to the deputy commissioner, New York State Department of Health, located at Albany, N. Y. He is editor of a very interesting pamphlet called "Health News" which serves as a monthly bulletin of the New York State Department of Health. Rickards has recently been made one of the assistant editors of the "Abstract Journal of Bacteriology" in charge of the Public Health Bacteriology.

The secretary had a very interesting visit with Clifford Swan in New York last month. Swan is doing some very excellent work in architectural acoustics and is considered the leading authority on the subject in the United States at the present time.

The secretary also spent a very pleasant evening at the Chemists' Club last month with Earle B. Phelps. Phelps is moving to New York to take up consulting work. His experience with the government practically assures him of a successful practice.

The secretary mailed a circular letter with the bills for class dues, asking for the opinion of members of the class as to the advisability of holding a twentieth class reunion this year. Numerous replies have been received. The answers from these will be tabulated and the results written to the members of the class. There are quite a number of men who are very anxious for such a reunion. The suggestion has been made that a reunion be held at the Lake Placid Club, Lake Placid, N. Y. A cottage could be secured at that club where all the men could room together and take meals at one of the central clubhouses. Those of our members who have been at the Lake Placid Club know the facilities for all outdoor sports that the club affords. Golfing, tennis, rowing, mountain climbing and picturesque walks are available to every one.

Every member of the class is urged to send in to the secretary his opinion regarding such a reunion for this year.

The secretary wishes to state that the notes in this number of the REVIEW are largely the result of answers to the letter asking for the opinion of the members of the class regarding a class reunion next summer. It is very gratifying to be able to report from so many different men.

1900

INGERSOLL BOWDITCH, Secretary, 111 Devonshire Street, Boston, Mass.

On Saturday, March 1, the class held an informal meeting at the Walker Memorial, where class matters were discussed.

It was decided to do nothing about publishing an account of the war records of the members until the Alumni Association had decided what it was going to do. A class dinner was planned and this will probably take place some time in April. Sixty postals were sent to the members of the class living in and near Boston, and the following members attended the alumni dinner: Batcheller, Bowditch, Brigham, Bugbee, Conant, J. B. Davis, C. J. Dunbar, Fitch, Howe, Jennings, Reardon, Remington, Russell, Sperry, Wastcoat, Ziegler. Unfortunately some of the fellows did not buy their tickets until the afternoon of the dinner and not enough seats at one table were available, so that some had to sit with other classes. We hope that room will be available next year so that all the class can sit together. The dinner was a great success, but all regretted that Lansingh was not given time to tell about his work in Paris, which Gibbs has been carrying on with such great success. It has been suggested that Gibbs be made field secretary of the Alumni Association as soon as his work in Paris is finished.

Russell has been asked to take charge of the Junior Plattsburg this summer. As soon as his plans are made perhaps he can be induced to give an account of what this work is.

Neall called up about the middle of March to say that he expected to give up his work in Washington and return to his regular work as a consulting engineer about the middle of May. He has had a great deal of experience in his government work, and contact with men from all parts of the country has been of great interest to him.

George W. Cutting, Jr., has been commissioned captain in the Engineers Reserve Corps and is stationed at Portsmouth, N. H., as material engineer for the Atlantic Corporation, builders of eighty-eight hundred ton steel ships.

Warren C. Tudbury has returned to California and is now at the Mare Island Navy Yard. In 1916 he left Los Angeles and took a position at Washington with the Bureau of Yards and Docks. In a letter of March 8 to Bowditch, he writes:

> While there a daughter, Patricia Breed Tudbury, was born to us on March 8, 1918. We named her Breed because she was born on my greatgrandfather Breed's birthday. He, Holton Johnson Breed, was commander of the private armed brig of war "Grand Turk" of Salem in the War of 1812. Little Patricia is celebrating her first birthday today. California agrees with her, as she weighs twenty-five pounds and has a crop of eight teeth.

Last May his lease expired and as he was unable to find an abiding place in Washington, he asked to be transferred to the Mare Island Navy Yard, where he has a position of expert aide. While in Washington he frequently saw Thurber, Southwick, Cooke and Stratton.

Everett has been elected president of the New Hampshire Highway Association.

The following are the latest changes in addresses:

Mr. Clarence C. Brown, 154 West Hortter Street, Mount Airy, Penn.; Capt. George W. Cutting, Jr., 160 Middle Street, Portsmouth, N. H.; Maj. James C. Heckman, 196 Soldiers Place, Buffalo, N. Y.; Mr. Lewen F. Searle, Allaben, Ulster County, N. Y.; Maj. Charles E. Smith, 2075 Railway Exchange Building, St. Louis, Mo.; Mr. Frederick W. Snow, care U. M. H. K., Elisabethville, Katanga, Congo Belge, Africa, via Cape Town and Rhodesia; Lieut.-Col. George S. Tiffany, 1162 4th Avenue, Louisville, Ky.; Mr. Warren C. Tudbury, Public Works Office U. S. Navy Yard, Mare Island, Cal.

1901

Robert L. Williams, Secretary, 107 Waban Hill Road North, Chestnut Hill, Mass.

The following men of our class attended the annual meeting of the Alumni Association in the Walker Memorial: Brigham, Bittinger, Chandler, Appleton, Dennison, Read, Taft, Walker and Williams. War experiences were talked over and an enjoyable evening spent inspecting the new Walker Memorial and listening to the after dinner speeches.

James F. Monaghan is now a major and is on the Peace Commission, chief of the Textile Section to appraise war damages by the Huns to all textile plants in France and Belgium. The secretary has recently received a letter from him from France in which he says:

> I have some 3600 plants to appraise. Will be home when the shadows are getting long again. Have been all over France so far and part of Belgium. Saw the worst destruction I could ever imagine, will be glad to tell you about it later. Haven't seen any of our classmates over here. Billy Aldrich was a captain at Tours but has gone home long ago. I saw Leonard Wood; by the way, he is a major. Give my best to all the boys when you see them.

Stanley C. Sears who received his commission as captain only a few days before the armistice, has been discharged from the engineers and is now in Cambridge, Mass.

News of the death in France of Capt. William W. Walcott has recently reached us.

John F. Wentworth, XIII, died from influenza December 20, 1918 at Rochester, N. H.

According to Peter O. Knight, vice-president and general counsel of the American International Corporation, the American International Shipbuilding Corporation is endeavoring to obtain the services of Matthew C. Brush as successor to Frederick Holbrook who has tendered his resignation as president.

Since our brief notice of Edward B. Cook's death in the October Review, we have received the following clipping from the "Iron Trade Review:"

> Edward Bailey Cook, assistant manager of the blast furnace department of Pickands, Mather & Co., Cleveland, died October 13, at his home in Cleveland following an attack of influenza, which developed into pneumonia. Mr. Cook had

been identified with the Pickands, Mather interests since November, 1912. Previously he had been connected with the Warwick Iron and Steel Company, Pottstown, Pa., where he had obtained a very extensive blast furnace experience in association with his father, the late Edgar S. Cook, who organized and became president and general manager of the Warwick Company, in 1899. Mr. Cook was thirty-nine years old, having been born in Pottstown, in 1879. He was graduated from the Massachusetts Institute of Technology and his first position was that of firing the boiler of the Warwick Company. Through various promotions he rose until he was general manager of the Warwick blast furnaces when he resigned to become affiliated with Pickands, Mather & Co. He leaves a widow and four children, his mother and two brothers. One of the latter is a lieutenant in Great Britian's aviation service and the other is a captain in the medical reserve corps which was sent on a diplomatic mission to Armenia and Persia.

Mr. Cook was one of the well known and most highly regarded blast furnace men among the younger school of blast furnace operators in the country. He was a man of very progressive ideas and through the exercise of this trait largely made the Warwick furnace blast one of the most productive and best equipped merchant properties in the east. He was a member of the American Iron and Steel Institute and of various clubs at Cleveland, Toledo, Erie and Canton, Ohio. Interment was made at Pottstown, where his mother resides.

Notice has been received from Mr. and Mrs. Henry C. Marcus of the birth of a daughter, Virginia Marcus, December 12, 1918.

W. S. Pepperell is still with the Draper Company and during the war has been very busy, part on actual government service in aid of textile production, ducks, uniforms, etc., and production of machinery for same. He has been responsible for raw materials for the Draper Corporation which was almost entirely on government work.

T. H. Taft, assistant professor of Mechanical Engineering at the Massachusetts Institute of Technology has been giving instruction in the United States Shipping Board School for Engineer Officers in addition to his regular work.

George M. Spear died October 4, 1918, in Philadelphia.

W. J. Sweetser, professor of Mechanical Engineering at the University of Maine, has also been educational director for the University of Maine Training Detachment for training enlisted troops as auto mechanics, gas engine mechanics, blacksmiths, carpenters, electricians, and machinists.

The following recent changes in address have been received:

Lieut.-Com. Ralph Whitman, Santo Domingo City, Dominican Republic, care United States Military Government; Alexander J. Taylor, 1900 Van Buren Street, Willmington, Deleware.—T. F. Lange, Turner Construction Company, New York, N. Y.—Lieut.-Com. F. B. Driscoll, 15 Dey Street, New York, N. Y.—J. D. Evans, 1 Leighton Avenue, Yonkers, N. Y.—H. R. Gibson, care United States Rubber Company, 58th Street, and 11th Avenue, New York, N. Y.—W. J. Sayward, 609 Chamber of Commerce Building, Atlanta, Ga.—M. C. Brush, American International Corporation, 120 Broadway, New York, N. Y.—W. F. Davidson, 5743 Walnut Street, Philadelphia, Pa.

1902

Frederick H. Hunter, Secretary, Box 11, West Roxbury, Mass.

J. Albert Robinson, Assistant Secretary,
Care Federal Board of Vocational Training, Washington, D. C.

On the evening of February 15, twelve classmates assembled for dinner at the United States Hotel, Boston, to hear Maj. Lewis E. Moore tell of his experiences in the Engineer Corps in France. Those present were, Fitch, Arthur Sawyer, Fisher, Burt Philbrick, Collier, " Doc " Williams, Hunter, Mahar, Galaher, Robert Whitney, Boardman, Hamblet. After the menu we sat around the large table, Moore talking far into the evening in a familiar way that held interest. There were many intimate details brought out in the free and easy talk that would have been missed in a more formal affair, and all felt well repaid and very grateful to Moore for giving us such an insight into affairs on the other side.

On the evening of March 1, the following classmates attended the annual banquet of the Alumni Association at the Walker Memorial, it being the largest delegation of the class which had been out at such a meeting for many years. " Bob " Whitney, Moore, Haskell, Arthur Sawyer, Galaher, Upham, " Doc " Williams, Boardman, Kellogg, Ritchie, Teague, Fitch, Collier, Hunter were at the dinner. Bert Sherman and Jack Marvin called in at the building during the afternoon but were unable to stay for the dinner. Those on hand in the afternoon to inspect the building tried out the bowling alleys with the result that Sherman took the honors for the class with 99 at candle pins.

Les Millar is with the Mark Manufacturing Company, Conway Building, Chicago.—Martin Hamblet is at present located in Lowell, his address being 62 Robbins Street, but expects to return to his home in Winchester, Mass., within a few months.—McKechnie is with the New Jersey Zinc Company, Franklin, N. J.—Ike Reynolds has returned to Foxboro after an extended stay in the Adirondacks where he fought off a threatened attack of tuberculosis.

Arthur Sawyer has located in Boston with Hooper, Kimball & Williams, Investment Securities, 35 Congress Street, his present residence address being 689 Massachusetts Avenue, Cambridge.—Archie Gardner is yard manager with the A. Bentley & Sons Company, Jacksonville, Fla., and is busy building concrete ships. —Charlies Kellogg is now connected with the home office of the Stone & Webster Management Association, but he hardly got acclimated to Boston before the tangled affairs of the Interborough called for his expert services in New York.

Jack Marvin is with the Holtzer Cabot Electric Company, of Boston, his residence being, 142 Middlesex Road, Brookline.—James L. Taylor, Jr., is reported from 55 East 86th Street, New York.—Fitzgerald's address is 546 Forest Avenue, River Forest, Ill.—E. C. Reeder is with the Lidgerwood Manufacturing Company, 1917 Fisher Building, Chicago.—Alsburg has moved his office to the Tribune Building, Chicago.—Stillings is captain in the Ordnance Division, located at Bridgeport, Conn.—Brainerd is with the Russell Manufacturing Company of Middletown, Conn., his residence is in the town of Portland, just across the Connecticut River, address being Box 644, Portland, Conn.—Lombard is in Fresno, Cal., his address being the Rowell Building—Bob Edwards has crossed the continent, and is now a consulting chemical engineer with office at 69 Fulton Street, Boston.—Comins has been advanced to the rank of major in the 70th Infantry and when last heard from was at Camp Funston, Kansas.—We understand that Comins has been decorated for distinguished service on the other side.—Bert Haskell has returned from Argentine and is now located with the E. B. Badger & Sons Co., 75 Pitts Street, Boston.

Classmates will learn with deep regret of the death of Antonio M. Lage, at his home in Rio de Janiero, on October 20, from influenza. Lage had been in Rio for many years with the family interests. We had word some time ago of his marriage, and the birth of two sons, Antonio A., and Alfredo, but he has not been heard from directly for many years.—Word has also been received of the death of Arthur Channing Clapp, on February 4, 1919, but no data as to the cause of his death. Clapp had been associated with the engineering forces of the city of New York, located at Burrough Hall, New Brighton, Staten Island, when we last heard from him. He married in 1907, and had one son, Richard Channing Clapp, who was born June 19, 1908, and a daughter, Florence M. Clapp, born May 17, 1912. Previous to being with the city of New York, Clapp was on the Catskill Aqueduct Work, and before that, with the Ordnance Department at the Sandy Hook Proving Grounds.—George Morton Spear, who graduated in '02, but who was affiliated with '01, died on October 4, in Philadelphia. Spear had been associated with the Cramp Shipbuilding Works for many years.

1903

Myron H. Clark, Secretary, 1790 Broadway, New York, N. Y.

Ralph H. Nutter, Assistant Secretary, Box 274, Lynn, Mass.

Following is an extract from the Boston Evening "Transcript":

> Capt. George C. Capell, whose home is in Watertown, and who has just returned from France, where, as a member of the 101st Engineers he saw all of the active service participated in by the Yankee Division, has been assigned for duty to the headquarters of the Northeastern Department where he reported this morning.
>
> Captain Capell is the son of Major J. F. Capell, who as an officer of the 16th Massachusetts was in service throughout the Civil War. He is also the nephew of Brigadier General M. C. Capell retired, who, for many years after the Civil War, was in the adjutant general's office. Captain Capell is a graduate of the Massachusetts Institute of Technology and was a master gunner in the old Massachusetts National Guard.

The following is a clipping from the "Electric Railway Journal":

> J. W. Welsh, recently on the staff of A. Merritt Taylor, manager of passenger transportation of the Emergency Fleet Corporation of the United States Shipping Board, has become connected with the American Electric Railway Association as special engineer to conduct studies and investigations of special subjects. He will have charge of the information service of the association, and will be located in New York. Mr. Welsh entered upon his duties on December 16. Before he was called to Washington by Mr. Taylor to assist the government, Mr. Welsh was electrical engineer and traffic agent of the Pittsburgh, (Pa.) Railways, with which he became associated in 1906 as assistant electrician. In 1910 he was made electrical engineer and in 1913 took charge of the traffic department of the company. Prior to this time he was employed as an electrical engineer by the National Tube Company, Wheeling, W. Va., and also by the Westinghouse Electric & Manufacturing Company at East Pittsburgh. He was graduated from Wittenberg College in 1900, Harvard University in 1901 and Massachusetts Institute of Technology in 1903. Mr. Welsh assisted on Mr. Taylor's staff in providing transportation facilities and abating deficiencies, where such existed, to the various shipyards on the Atlantic and Pacific Coasts. Since 1914 he has been chairman of the power generation committee of the American Electric Railway Association.

CHANGES OF ADDRESS

Louis W. Adams, Ashland Iron & Mining Co., Ashland, Ky.—Lt.-Col. Horace S. Baker, 6657 Greenview Avenue, Chicago, Ill.—Charles S. Cole, 320 Penobscot Building, Detroit, Mich.—Montague Ferry, 158 Sterling Road, Toronto, Canada.—

Richard M. Field, 62 Pierrepont Street, Brooklyn, N. Y.—Maj. Richard M. Lawton, 681 Orange Street, New Haven, Conn.—Harry R. Low, 806 Marion Street, Denver, Col.—Harold L. Norton, Arizona Commercial Co., Globe, Ariz.—Thomas E. Sears, Ives, Baird & Sears, 10 High Street, Boston, Mass.

1904

Henry W. Stevens, Secretary, 51 Wallingford Road, Brighton, Mass.

Amasa M. Holcombe, Assistant Secretary,
610 Boatmen's Bank Building, St. Louis, Mo.

At the annual alumni dinner our class was represented by a "baker's dozen." So far as is known at present no bad luck has resulted from the fact that thirteen sat down at the table which had covers laid for ten. It was close quarters, but those present were thus able to get into more intimate contact with each other than would otherwise have been the case, and no one minded it a bit.

Although A. P. Porter arrived at the Walker Memorial early, Al preserved his reputation by being the last man to arrive at our table. Previous to the assembly in the dining hall he gave an exhibition of athletic ability by gracefully traversing the flying rings in the gymnasium without mishap. Charley Haynes proved that he still possesses that wonderful tenor voice, which made him famous during his student days. In the words of Newton Newkirk "A pleasant time was had by all," swapping yarns and experiences. Those present were: Stebbins, Kendall, E. H. Russell, Haley, Porter, Hayward, King, Munster, A. G. Drew, Todd, Haynes, P. S. Sweetser and Stevens.

Homer is at present connected with the Fore River Ship and Engine Co., at Quincy, Mass.

A letter from Lee Phillips states that he makes his headquarters with the National Radiator Company, at 215 Wood Street, Pittsburgh, Pa., and that any Tech man coming that way will be given a hearty welcome.

Hiller called on the secretary recently, he is connected with the Hartford Fairmont Company, at Hartford, Conn., as installation manager. H. E. Peiler is also with the company as experimental and development engineer. Peiler leaves shortly for a trip to Europe for the company. This company manufactures glass bottle machinery.

A letter from Mrs. Charles J. Conway brought the sad news of the death of another member of our class, Charles J. Conway, who died from influenza on November 10, 1918, at their former home, 2126 Brown Road, Cleveland, Ohio.

Additions to our lists of class members who served our country in the great war are as follows:

Emmet Cockrill, 1st lieut., Ordnance Corps, assigned to duty as Plant Supervisor, Ford Motor Car Company, Highland Park, Mich.

Howard Moore, major, Medical Department, U. S. A. Major Moore was promoted from the rank of captain on February 26, 1919 as a reward of merit for excellent work. He is in charge of the convalescent camp in Mesves Hospital Center, France, having been transferred from Base Hospital 44, one of the Massachusetts Homeopathic hospital units. His home is at 310 Bellevue Street, Newton, Mass.

and he is orthopedic surgeon at the Newton Hospital and sailed with their unit as captain, July 5, 1918.

A. L. Coupe, assistant superintendent of construction, sewers, and water department, United States Explosives Plant Company, Nitro, West Virginia.

A. W. Bee, Jr., (now with Leonard Construction Company, Chicago) January to June, 1918, engineer in charge Area B (Sulphuric Acid Department) United States Explosives Plant C, Nitro, West Virginia. July to September, 1918, engineer and purchasing agent, for the United States Contract Sulphuric Acid Plants at Cuba City and Benton, Wisconsin. October to December, 1918, construction manager, United States Sulphuric Acid Plant, Emporium, Pa.

1905

Grosvenor D' W. Marcy, Secretary, 246 Summer Street, Boston, Mass.

Charles W. Hawkes, Assistant Secretary, 25 Saxon Road, Newton Highlands, Mass.

The secretary is back on the job again, and is gradually getting reaccustomed to the feeling of floppy trousers instead of " putts." He saw some mighty interesting work in Washington, beginning in the Military Intelligence Division, and was fortunate enough to be under Maj. Grafton Perkins, '05. Perk was in charge of a wholly new branch of the work, which under his leadership demonstrated its importance to such an extent that it was formed into the Morale Branch of the General Staff, Brig.-Gen. E. L. Munson being put in charge and Perkins continuing as executive officer. The full story of this work may sometime be told, but at the time of the armistice it was just effectively getting under way. The changed conditions of course caused a complete change of plans, but rather accentuated the importance of the work, which is being pushed with full force in this country in spite of the difficulties of demobilization and rapidly changing personnel. Perkins' rise in less than a year from a second lieutenant to a majority is one more honor for '05.

While the secretary has been away, the class business has been efficiently handled, and the Review news written (as most of this lot was) by the assistant secretary and others of the loyal '05 bunch in Boston. These choice spirits got up a dinner which was said by those present to be one of the most successful class gatherings ever held. The secretary got a notice of it before leaving Washington, which said that he and Major Perkins were scheduled to attend. Greatly to their regret, the date conflicted with a snowshoeing trip that had been arranged long ahead on the event of Major Perkins' and another officer's first leave of absence for over a year. (The three of us had a great week at Wonalancet, N. H., in spite of missing the dinner.) A brief account of the dinner from one of those present follows:

Thirty members of the class of '05 dined together at the Boston City Club, January 18. Professor Warren K. Lewis, who has recently returned from France, was the principal speaker. He gave a most interesting talk on the offensive and defensive use of gas in modern warfare.

Among other speakers were Lieut. Henry H. W. Keith, who told of his work at the Boston Navy Yard; Ensign Francis Hartley, who was at the Tech Aviation School, told of his experiences both here and across; Commander Tower, who told, in an interesting manner, of the naval work which was going on at the Institute.

" Billy " Green spoke on the use of mustard gas and " Hub " Kenway gave a most interesting account of the war work of the United Shoe Machinery Company.

" Ross " Davis was toastmaster, Charles W. Hawkes presided and Andy Fisher was in charge of arrangements.

The President of France has recently conferred the Cross of the Chevalier of the Legion of Honor on Professor Selskar M. Gunn, the honor being awarded for his extraordinary services in the fight against tuberculosis in France. Professor Gunn is now located at 109 Burnett Street, East Orange, N. J.

Lieut.-Com. Robert F. Luce is navigator of the U. S. S. " Madawaska " engaged in transport duty. His home address is Apartment 311, Wardman Courts West, Washington, D. C.—Capt. Hallett R. Robbins is now in Russia.—Capt. Robert S. Beard's present address is 1929 18th Street, N. W., Washington, D. C. This information was furnished by Mrs. Beard.

The following has been received from Mrs. Louis E. Robbe:

> Maj. Louis E. Robbe has been " over there " since December 26, 1917. Is now on the staff of the Third Army Corps in Germany, as chief gas officer, having charge of all offensive and defensive gas warfare of that corps since July, 1918. Was first in command of the 1st Battalion, 30th (Gas and Flame) Engineers up to July. Is now in the Chemical Warfare Service. Will write later for REVIEW.

W. F. Harrington of Wilmington, Del., in writing his regrets at missing the class dinner, says:

> This should be the year for a grand celebration. The war is over and we have much to be thankful for. Some of us who have been working very strenuously for the past four years, in the manufacture of powder, in order to assure the ultimate defeat of the Hun, do much appreciate the close-up. However, our job is not quite completed, and until such time, the pleasures of the class dinner will have to be foregone.

On January 18, at the same time the '05 men were eating dinner at the City Club, Chester Allen was going through the marriage ceremony, thereby joining the ranks of the fortunate ones. He has been with the Ordnance Department of the United States army at Amatol, N. J., helping build a shell loading plant, but is now released and is with the Foundation Company, Woolworth Building, New York City, which is building ships for the United States government and the republic of France.

William D. B. Motter has resigned as manager of the Benson Mines Company to join the staff of Guggenheim Brothers, as assistant consulting engineer with headquarters at 120 Broadway, New York City. For the next few months he will be in South America.

Bob Turner is now engaged in the general practice of law with Henry Herrick Bond, formerly Income Tax Deputy of Massachusetts. They have opened offices in the Kimball Building, Boston.

An interesting letter has been received from George B. Jones of Chicago, relating instances which took place during a western trip and stating that he saw Leonard Bushnell while in Seattle and found that he was one of the leading lights of the town, being at present at the head of Armenian and other Eastern relief work, vice-president of the Arctic Club and an ex-president of the Rotary Club. George says:

> Perhaps the " ex " will be explained by the fact that, while president, he made a special effort to secure as a speaker a " hero of Vimy Ridge," who gave a talk about

his experiences that moved everyone to tears and prompted Bush to suggest that a collection be taken to assist the hero's wife who was in a hospital in some distant place. This was done, but some time later it appeared in some eastern paper that the alleged hero had been a cook in some Canadian regiment and had been fired out before the regiment went to France.

He concludes by saying that on the way from Seattle to Vancouver he ran into Joe Daniels on the steamer.

A few days before Jones' letter arrived, one was received from Joe, himself, relating in a humorous vein his meeting with George. Joe suggests that an article on "Wild Game Birds of the Pacific," illustrated with photos by the author, would be excellent reading from the pen of George B. Jones of Chicago. This is a travesty on Jones' attempt to photo the scavenger gulls that followed their boat.

E. Logan Hill, secretary of the United States Shipping Board Commission on Port and Harbor Facilities, has resigned and become associated with Heyl & Patterson, Inc., contracting engineers of Pittsburgh, Pa. Previous to his appointment as an official of the Shipping Board, Hill was assistant general manager of the Erie Railroad. He will be located at the Heyl & Patterson, Inc., Sales Office, 90 West Street, New York City, which is particularly interested in the application of their cranes to wharves, cargo handling and other special purposes.

H. A. Wentworth writes that while in Fort Worth in February he met George Fuller, who is with the Roads Department of the United States government, studying in conjunction with the state of Texas, the road requirements of that section. Wentworth adds:

> In spite of the surplus of marriageable ladies, George apparently hasn't been able to locate one who suits him. No—this isn't an "ad."

The class of '05 learns with regret of the death of Sidney A. Smith, Jamestown, N. Y., who died at St. Petersburg, Florida, February 13, 1919.

A. M. Dean, vice-president and chief engineer of The Templar Motors Corporation of Cleveland, has been another winner of the war.—His company has been making 155 mm. shells and he says that he can justly say that in so far as was possible they have done their bit.

Fred W. Goldthwaite has been elected a director of the Burnett-Larsh Sales Company, Inc., of New York and re-appointed New England manager.

CHANGES OF ADDRESS

Carl T. Humphrey, 638 South 57th Street, Philadelphia, Pa.—Louis C. Winship, 55 Quincy Street, North Adams, Mass.—Charles E. Broad, 192 Duncan Street, San Francisco, Cal.—James I. Banash, 30 East 42d Street, New York City.—Frederick H. Andrews, Southwestern Graphite Company, Burnet, Texas.—Joseph H. Brown, Jr., 413 Peoples Gas Building, Chicago, Ill.

1906

C. F. W. WETTERER, Secretary, Box 168, Tampa, Fla.

JAMES W. KIDDER, Assistant Secretary, 50 Oliver Street, Boston, Mass.

In a letter to Postmaster-General Burleson Theodore N. Vail, president of the American Telephone and Telegraph Company, announces the most recent practical application of the work of the technical staff of the Bell system, namely the development of a system of multiplex telephony and telegraphy. By this system five telephone conversations can be carried on over a single pair of wires, also eight times as many of high speed printer telegraph systems, or ten times as many of the ordinary duplex telegraph circuits can be obtained than are obtainable under existing methods.

Mr. Vail's letter gives credit to the technical staff of the Bell system for these new developments, mentioning particularly the work of seven men of the engineering department of the American Telephone and Telegraph Company and eight men of the engineering department of the Western Electric Company. O. B. Blackwell is included among those of the former organization and B. W. Kendall appears in the list of the Western Electric Company.

Blackwell is a Course VI man who has been with the American Telephone and Telegraph Company since graduation, and is now the Transmission and Protection Engineer of that company.

Kendall is a Course VIII man. After receiving his degree he spent two years at the Institute as an assistant in Physics and five years studying at Columbia and teaching at that university and at Barnard. In 1913 he joined the engineering staff of the Western Electric Company and has since been engaged in work upon the important improvements in telephone transmission developed recently by the engineers of the American Telephone and Telegraph Company and the Western Electric Company.

Clarence Lasher, VI, who was with the Pawtucket Gas Company, writes that he is at present with the Puget Sound Traction Light and Power Company at Bellingham, Washington, where he is superintendent of the Gas Department.

The marriage is announced of Miss Annetta Richardson Fairlamb and Percy Ethan Tillson at Philadelphia on January 31, 1919. Mr. and Mrs. Tillson will reside in Germantown, a suburb of Philadelphia.

Eight members of the class were present at the annual alumni dinner held in the Walker Memorial on March 1. Joe Lawton, wearing the uniform of a major in the Engineers Corps, was on from Washington. Burton Kendall arranged a business trip from New York in order to lend his presence to the occasion. H. T. Gammons, II, who is now with the Hamel Shoe Machinery Company, in Haverhill, celebrated his return to this part of the country by renewing his class associations at the dinner.

In the circular letter recently sent to all members of the class, a form was included for obtaining individual war service records. Many of these forms have been returned, and they contain much information of interest to all members of the class. It is hoped that this information can be included in a small book or pamphlet and issued as a War History of 1906. Any one who has not yet sent in his war service record is urged to do so as soon as possible.

The 1906 Notes in the January Review contained a brief notice of the death of Jorge Lage upon October 20, 1918, from influenza. Lage was born in Rio de Janeiro, Brazil, December 31, 1882. Before entering the Institute he had studied in Europe preparing for Tech at the Gymnase Cantonal de Neuchatel, Switzerland. At the Institute he was an active participant in class affairs and one of the most popular members of 1906. He was particularly noted for his ability as a fencer and for three years was captain of the Institute Fencing Team. In his senior year he was a member of the Class Day Committee. Lage received his degree in Mechanical Engineering and then returned to Brazil to enter the shipbuilding business with his father. He remained in this business until his death. Harold Coes, who was as close to Lage while he was at the Institute as any member of the class, writes as follows regarding him:

> It is needless to say that I was greatly shocked to learn of the death of Lage. I used to keep in touch with him and hear from him every couple of years. I think it has been over a year and a half, possibly two years, since I heard from him. At that time his father had died. This was before the United States entered the war, and part of the burden of conducting the ship repair yard and other interests left by his father at Rio Janeiro had fallen on Jorge's shoulders, and he said at that time that the financing of the business was becoming increasingly difficult in Brazil and that he had his hands full. Of course, I have not seen him since we graduated. At that time he gave promise of growing up to be an extremely able, useful and broad-minded citizen. I remember distinctly discussing with him in his room one night some of the problems of his own country. Jorge had travelled a good deal. He had been educated in London and Paris, I believe, prior to his coming to Tech, although he had several brothers who had been to Tech before him. In the course of our discussion regarding the internal affairs of Brazil I asked Jorge what was the reason for the apparent segregation and stratification of business and society in Brazil as I understood it. He made the very illuminating and broad-minded remark to the effect that there were " too many of us Portuguese," and that it needed American business methods and push to put Brazil where he felt she could be placed. He was deeply interested in his country, in its affairs, its people, its growth and future possibilities, as indicated from time to time in the correspondence I had with him, and was always deeply interested in the affairs of the Institute, and I remember he wrote me at length at the time of the Rand Memorial, as he was a deep admirer of Mr. Rand.
>
> Lage had many friends at the Institute. He had a magnetic personality, was a lovable type of man and was greatly admired, respected and appreciated by all who knew him, and particularly so by those of us who were counted as his friends. It was, therefore, with deep regret that I learned of his death through your letter, for his city, his class, his country have lost an able citizen and a valued classmate.

Harold Coes wrote that he has been very busy with war work and from the list of activities which have occupied his time for the last eighteen months we agree that he must have been busy. Coes also wrote that Charley Howard had been a victim of influenza, but fortunately was on the road to recovery, and that E. P. Chase, who had been a lieutenant in the navy, was now back at his former position with the New York Public Service Commission.

The secretary regrets to report the death of another classmate, namely, Fred Charles Lebenbaum, IV, who died December 17 of influenza. Lebenbaum was born January 26, 1882, at San Francisco, Cal. He prepared for the Institute at the California School of Mechanical Arts and attended Technology two years. He went abroad, spending two years at the atelier of M. Laloux of the Ecole de Beaux Arts. He returned to America in 1909 and assisted with Samuel A. Marx in organizing the firm of Lebenbaum & Marx in Chicago in 1910. His business associate, Mr. S. A. Marx, writes as follows:

> Mr. Lebenbaum possessed a rare degree of ability in designing and planning, which, coupled with a delightful personality, won for him many warm friends and admirers, in connection with his professional career.

Mr. Lebenbaum is survived by a wife and one child.

The class is indebted to our classmate, E. S. Campbell, IV, for the news of Lebenbaum's death. Campbell is a professor of Architecture at the Armour Institute of Technology at Chicago. We have recently received a very artistic booklet illustrating the work of the Architectural Department of which Campbell has been the acting head for the past three years.

Clarence Carter, I, is now resident engineer for the U. S. Housing Corporation at Project 59, Bath, Me.—J. I. Banash, VIII, has left the Underwriters' Laboratories in Chicago and is now in New York at 30 East 42d Street.— Ernest J. Ball, II, writes that he has just been made head of the Textile Engineering Department of the Lowell Textile School.—Michael J. Ahearn, XII, has recently been elected president of Canisius College at Buffalo, N. Y.

1907

BRYANT NICHOLS, Secretary, 10 Grand View Road, Chelsea, Mass.

HAROLD S. WONSON, Assistant Secretary, 354 Congress Street, Boston, Mass.

A daily paper published in Syracuse, N. Y., under the date of January 27, 1919 states that E. W. Bonta, who is Y. M. C. A. secretary in Russia, expects to be home in June. A very interesting description of his experiences is printed elsewhere in this number of the REVIEW.

Maj. Allan R. Cullimore, Delaware College, Newark, Del.—Harry A. Fame, Box 628, Cleveland, Oklahoma.

A letter dated January 8 from T. W. Hanford states that he is chief draftsman of the machinery drafting room at the navy yard in Bremerton, Wash. He has been working extremely hard in connection with war work, and even now has plenty to do for some time to come.

Tom Gould has moved to Providence, R. I., is associated with Roy Beatty, a building contractor.—A daughter, Margaret Porter Hastings, arrived in the home of Professor and Mrs. Hudson B. Hastings, in Portland, Oregon, on February 21, 1919. This is their third child, the other two being boys.

Again in this issue of the REVIEW as in the January number, it is the sad duty of the secretary to record deaths in the families of some of our classmates.

The following item appeared in the January 9 number of the " Engineering News-Record ":

> Capt. Grandville Reynard Jones, Sanitary Corps, U. S. A., previously associate professor of civil engineering, Johns Hopkins University, Baltimore, died of influenza at Camp Benning, Columbus, Ga., December 22, 1918. Captain Jones was graduated from the Ohio State University in 1904 and from the Massachusetts Institute of Technology in sanitary engineering in 1907. His principal professional work was with the filteration plant, Washington, D. C. At Johns Hopkins University he designed and built the Hydraulic Laboratory and the Laboratory of Sanitary Research. He developed several courses in sanitary engineering for the senior classes in civil engineering at Johns Hopkins. Early in November of last year Professor Jones was commissioned in the Sanitary Corps, with the rank of captain, and was ordered to Camp Greenleaf, Georgia, for a brief period of training, at the end of which he was sent to Camp Benning as camp sanitary engineer.

The secretary received a brief letter on March 10 from Frank S. MacGregor, written from Miami, Florida, where he was spending several weeks of vacation. Frank is with the du Pont Powder people, at Room 4058 du Pont Building, Wilmington, Del.

William H. Martin is with the Foundation Company, 1905 Woolworth Building, New York City.

Lieut.-Col. George R. Norton's address is the Cordova, Apt. 454, Florida Avenue, and 20th Street, Washington, D. C.

Emory Chase Noyes, a graduate in Civil Engineering, died on October 23, 1918, after a month's illness of influenza and pneumonia. From the time of his graduation until December, 1907, Noyes was engaged in general engineering work with Stone

& Webster Engineering Corporation, Boston, and from that time until October, 1908, was a surveyor and draftsman with the Inspection Department of the Associated Factory Mutual Fire Insurance Companies in Boston. For a few months he was an expert aid at the United States Naval Training Station at Newport, R. I., on steam power plant work. In 1909 he entered the employ of the Ferro Concrete Construction Co. at Cincinnati, Ohio, and was with them as designing engineer, resident engineer, and superintendent until February of 1911. At that time the Trussed Concrete Steel Co. of Youngstown, Ohio, secured his services, and he was successively designer, chief engineer of the San Francisco district office, chief engineer of the Los Angeles district office, manager in charge of Los Angeles office, until April, 1918. From then until the time of his death he was assistant chief engineer of the Concrete Ship Division, Emergency Fleet Corporation, United States Shipping Board at Philadelphia.

Noyes was married in 1907 to Miss Flora E. Lane, who survives him, and who lives at 25 Faulkner Street, Malden, Mass. He was a fellow of fine integrity and ability, respected by his business associates and loved by those who knew him intimately. The sympathy of the class goes out to his widow, his parents and his brother.

Raymond Parlin has had to change his business activities on account of war readjustment and now is located at Cambridge, Mass., as a salesman of Mack Motor Trucks. Capt. Hugh G. Pastoriza, 2204 Austin Street, Houston, Texas.

The sympathy of the class goes out to "Kelly" Richards on account of the death of his wife on January 16, 1919. Karl is left with two small children.

Emerson H. Packard is finely prosperous in the coal business in Brockton, Mass. A consolidation has been affected by "Pack's" concern with another and on April 1, 1919 the Packard-Mills Coal Company began operations.

Marcellus Rambo, Course II, writes on December 21, 1918, from Avenida Rio Branco, 243 Rio De Janeiro, Brazil, S. A., as follows:

> I have abandoned engineering and taken up dentistry. Have been here for five years and cannot say that I am not doing well. I was married on June 29, 1918 to Miss Bessie Crowther of Huddersfield, Yorkshire, England.

Selden E. Rockwell, is now addressed at 2332 North 62d Street, Seattle, Wash. —Bob Thayer has gone to London, England, as editor and representative there of the "Railway Age Gazette."

A letter received from Carl T. Trauerman describes in detail his various activities in mining operations of different kinds. He is managing director of the T. S. Manganese Corporation, New York, Montana Testing and Engineering Company, and the Monarch Mining and Power Company. His address is 132 E. Alumnium Street, Butte, Mont.

Maj. Arthur K. Tylee, 4 Hospital Street, Montreal, Canada.—The following is clipped from the Chattanooga, Tenn., "News" of January 3, 1919:

> Chattanooga's development as the electrochemical center of the South received an impetus today which will go far towards making its pre-eminence absolutely undisputed when an application for a charter for the Southern Cottrell Precipitation Company was filed. The new company asks for a charter for a $100,000 corporation.
>
> Prof. Willis G. Waldo, who will devote all of his time to the enterprise, will remove to this city with his family on Sunday. He is no stranger to Chattanooga. As instructor of mathematics and applied mechanics at Vanderbilt University, in Nashville, he was persuaded by the men in charge of Tennessee River improvement, such as Senator Underwood, the late John A. Patten and C. H. Huston, to lend his brilliant engineering talents to the Muscle Shoals cause. Through the intervention of leading business men of Nashville and the South, the trustees of Vanderbilt University accorded him a leave of absence in which to compile the technical data

with respect to the utilization of the nearly 600,000 horse power now going to waste on the Tennessee River. This task occupied his entire time for upward of a year, in which period he wrote the now famous Muscle Shoals brief, which resulted in the government expenditure already of more than $60,000,000 on the two nitrate plants near Sheffield.

Long since attracted by the "Chattanooga spirit" and the desire to enter commercial life in some line where more blades of grass could be made to grow than were growing already, Dr. Waldo had grown enthusiastic over the possibilities of the application of the Cottrell process to the industries of this section and on New Year's Day presented to his friends here the prospectus on which the new organization is based. In two hours the capital was pledged, attorneys employed to arrange for the incorporation and negotiations, based on previously acquired patent license were started with J. J. Gray, of Columbia.

The company has acquired a contract as licensees under the patents covering the so-called Cottrell process for precipitating and recovering matter suspended in gases and smoke from industrial plants, especially in chemical and metallurgical lines.

When the charter returns from Nashville, Professor Waldo will be elected president and general manager.

On account of the ending of the work of the Boston Transit Commission, P. B. Walker became associated with Fay, Spofford & Thorndike, Consulting Engineers, of Boston. He has been an engineer on the work at the Boston Army Supply Base. Barbara Walker arrived at his home on January 17, the third child.

Albert E. Wiggin, 19 Smelter Hill, Great Falls, Mont.— E. C. Wilson is captain, Co. C, 114th Engineers, A. E. F. His home address is 8 Gilman Street, Waterville, Me.

Harold Wonson, who has been a lieutenant-colonel in the army received his discharge in January and has a very responsible position with the W. H. McElwain Company, shoe manufacturers. At present he is located at their factories in Manchester, N. H.

Nathan A. Middleton, who is a major in the United States Army Engineering Corps, was commissioned captain of engineers on September 2, 1917 After spending over two months at the Training Camp, Washington, D. C., he was assigned to the General Engineering Depot at Washington, D. C., in the department of purchasing of engineer equipment. Before sailing for France he was assigned to the 23d Regiment of Engineers and appointed adjutant of the third battalion, in March, 1918. He was promoted to major of Engineers, Army, A. E. F., where he had charge of the construction and maintenance of roads, commanding about 17,000 troops. The regiment was later relieved from duty with the First Army and assigned to the reconstruction of roads and general engineering work in the forward area. Major Middleton was appointed in command of all S. O. S. troops in his district in addition to his former command, in January, 1919. His present address is 3d Battalion, 23d Engineers, A .E. F.

Lawrence R. Davis is now to be found at 2705 East Sixteenth Avenue, Denver, Col.—Lawrence C. Hampton, 1829 Altamira Place, San Diego, Cal —Floyd A. Naramore, care of Public Schools, Seattle, Wash.—The secretary, Bryant Nichols on March 29, became the father of a fourth child, a son, Ernest Belcher Nichols, by name.

1908

Rudolph B. Weiler, Secretary
Care of The Sharples Separator Company, West Chester, Pa.

LeSeur T. Collins, Assistant Secretary
Care of Imbrie & Company, 13 Congress Street, Boston, Mass.

The regular bi-monthly dinner was held at the City Club on February 11 with Winch Heath in charge, as Tim Collins was laid up with a cold. Present: W. H. Toppan, E. I. Wells, S. F. Hatch, S. C. Lyon, B. S. Leslie, C. W. Morrison, E. J. Beede, H. A. Hale, Jr., C. W. Clark, H. S. Chandler, P. A. Esten, E. H. Newhall, M. Ames, A. W. Heath, G. M. Belcher. Bill Toppan entertained the bunch by recounting some of his experiences in the service.

E. G. Genoud, V., '08, whose death on October 12 was reported in the last issue, went to Germany after graduation in 1908 and spent three years in graduate study at the University of Berlin, receiving the degree of Doctor of Engineering in 1911. For the past three years he was connected with Arthur D. Little, Inc., Charles River Road, Cambridge. He prepared at the Boston Mechanic Arts High School and was one of the youngest members of the class, being under thirty years of age at the time of his death.

Arthur Truman Dean, I, '08, died December 14, 1918, at Bluefield, W. Va., of the influenza. He married in December, 1917. He leaves a widow, Mrs Pearl H. Dean at 23 Porter Street, Taunton, Mass. He had been with the Interstate Commerce Commission since 1914 mostly on valuation work, but was assistant field engineer for about two years prior to his death. He was a member of Ionic Lodge, A. F. and A. M. of Taunton, Mass. His death is the twenty-seventh to be recorded on the class records.

It is also our sad duty to record the death of H. H. Howland's wife on November 10, 1918, of the epidemic. Before her marriage on October 18, 1911, she was Miss Etta E. Mason, of Lowell, Mass. The sympathy of the class is extended to our bereaved classmate.

"Tim" Collins has left Marshall & Company and is now with Imbrie & Company, 13 Congress Street, Boston, Mass. F. K. Belcher has left the Pusey & Jones Shipyard at Wilmington, and is now inspector for Cramp's Shipyard at Philadelphia. E. I. Williams returned from Italy where he had been serving as captain of the Italian Commission of the Red Cross on January 21 and is now at 131 Passaic Avenue, Rutherford, N. J. Charles W. Whitmore is at the Geneva, Sea Breeze, Fla., in the process of recuperating from his nervous breakdown.

Those who attended the Alumni Banquet were L. T. Collins, A. S. Douglass, S. C. Lyon, B. S. Leslie, F. T. Towle, Matthew Porosky, W. J. McAuliffe, C. W. Morrison, P. A. Esten, E. I. Wells, E. H. Newhall, H. S. Chandler, Langdon Coffin.

NEW ADDRESSES

Lincoln Mayo, 1561 Beacon Street, Brookline, Mass.— Frank W. Wiley, 118 West 3d Street, Cincinnati, Ohio.—Charles W. Whitmore, 1963 Commonwealth Avenue, Brookline, Mass.—Aram Torossian, 30 Conant Hall, Cambridge, Mass.—Horace S. Sargent, 49 Katherine Road, Watertown, Mass.—Capt. D. B. Myers, Box 314, Pasadena, Cal.—Karl R. Kennison, U. S. S. B. Emergency Fleet Corp., 606 Lexington Building, Baltimore, Md.—Maj. Gerald T. Hanley, 349 Wayland Avenue, Providence, R. I.—Capt. Herbert T. Gerrish, 10 Haskell Street, Melrose, Mass.

—W. Fred Dolke, Jr., 611 Lees Avenue, E. Collingswood, N. J.—Leon A. Dickinson, Queen Anne Road, Teaneck, N. J.—Capt. Elliott S. Church, 8 Ardmore Terrace, West Newton, Mass.—Frank K. Belcher, 4228 West Girard Avenue, West Philadelphia, Pa.—Miss Mabel Keyes Babcock, 11 Joy Street, Boston, Mass.—Harry L. Burgess, Pacific Telephone and Telegraph Company, San Diego, Cal.—Douglas Cairns, 630 West 141st Street, New York, N. Y.—LeSeur T. Collins, 13 Congress Street, Boston, Mass.—Maj. Arthur S. Douglass, 164 Harvard Street, Brookline, Mass.—John C. Gaylord, 1025 Montrose Avenue, South Pasadena, Cal.—James E. Hale, 862 West Exchange Street, Akron, Ohio.—J. W. L. Hale, 24 Marlborough Street, Newburyport, Mass.—Philip J. Hale, 437 North 7th Street, Steubenville, Ohio.—Clarence L. Hussey, 100 High Service Avenue, Providence, R. I.—J. Allen Kane, Long Green, Md.—Lynn A. Loomis, 727 State Street, Springfield, Mass.—Maj. John Mather, care Adjutant-General U. S. A., Washington, D. C.—Maj. George A. Quinlan, 1321 East 53d Street, Chicago, Ill.—Capt. William H. Toppan, 126 High Street, Newburyport, Mass.—William E. Weinz, 24 Summit Avenue, Wakefield, Mass.—Rudolph B. Weiler, 340 North Penn Street, West Chester, Pa.—Lieut. Clifford L. Wade, Engineers Reserve Corps, Camp Humphreys, Va.—Douglas B. Turner, Sanford-Day Iron Works, Knoxville, Tenn.—Henry G. Nicholas, Mechanics Bank, Broadway and Bedford Avenue, Brooklyn, N. Y.—Lieut Ralph E. Manning, North Billerica, Mass.—Lieut. Howard B. Luther, Bureau Construction and Repairs, Navy Department, Washington, D. C.—W. H. Kiefaber, 601 East Monument Avenue, Dayton, Ohio.—Arnold W. Heath, 93 Boylston Street, Watertown, Mass.—Nelson S. Hammond, Braden Copper Company, Rancagua, Chile.—Philip J. Hale, 238 North 5th Avenue, Steubenville, Ohio.—George E. Freethy, 98 Barnard Avenue, Watertown, Mass.—Jacob A. Fottler, 262 Winter Street, Montello, Mass.—Leslie B. Ellis, care Lockwood, Greene & Company, Yorkship Village, Camden, N. J.—Clifford H. Boylston, Alabama Power Company, Gorgas, Ala.—Joseph Scott MacNutt, care C. B. Perkins, Perkins Street, Jamaica Plain, Mass.—Willard F. Rockwell, 16508 Euclid Avenue, Cleveland, Ohio.—Charles W. Bailey, North Hancock Street, Lexington, Mass.—Ernest E. Kilburn, VI., assistant general manager of Tide Water Power Company, Willmington, N. C.

1909

CHARLES R. MAIN, Secretary, 201 Devonshire Street, Boston, Mass.

GEORGE A. HAYNES, Assistant Secretary, 530 Atlantic Avenue, Boston, Mass.

A class meeting was held at the Walker Memorial on the afternoon of March 1, prior to the alumni dinner for the purpose of making preliminary plans for the tenth year reunion of the class, which will be celebrated this June. In accordance with a vote of the class at that meeting, the president has appointed the following committee to take charge of the arrangements for the reunion: Haynes, chairman; Ayres and Maynard (the secretary to assist in his official capacity as an officer of the class).

PLAN NOW TO BE THERE!

JUNE 14-17

TENTH REUNION, CLASS OF 1909

A BIG TIME FOR A BIG CLASS

Every 1909 man should begin now to arrange to be present at the tenth reunion. Arrangements are being made by the committee in charge for an unusually good time that will linger long in the memories of all members of the class.

It is planned to secure cottages at one of Boston's south shore resorts with central dining accommodations to be in charge of a famous chef. It is expected that transportation from Boston will be arranged by automobiles contributed by members of the class.

IMPORTANT

The committee counts on the assistance of all members in making this a time never to be forgotten. One way to greatly assist is to send the first payment of $10 to Charles R. Main, treasurer of the committee. It is necessary in perfecting the arrangements that some idea of the number to be present be made known at an early date. It is hoped that a sufficiently large attendance may be assured so that the total expense per member will not exceed $5 per day per man. The more men we can count on will mean a lower rate, so let your application come in now and thus lend us your support in making the 1909 tenth reunion a big success worthy of the class.

1909 TENTH REUNION COMMITTEE,

GEORGE A. HAYNES, Chairman,
RICHARD S. AYRES,
CLARENCE D. MAYNARD.

The committee certainly has the right idea; we want just as many fellows for the reunion as we can possibly get out. George has promised to give us a good time and it is none too early to begin to plan to be present at the festivities. Let's all of us talk reunion from now till the fourteenth of June, and we will have the biggest "tenth" yet pulled off by any class.

At the alumni dinner the class was well represented, about twenty of the men and two of the "co-eds" being present.

Lieut.-Col. Fred M. Greene has been detailed to the instructing staff of the Institute.—Lieut. Lynn A. Loomis is back from France and expects to be out of service soon. His address will be 727 State Street, Springfield, Mass.—Capt. Henry R. Putnam, has been discharged from service and his address is now, care of Missouri Iron and Steel Company, Arcade Hotel, West Plains, Mo.—Lieut.-Col. C. H. Crawford is now with the Baldwin Locomotive Works, Philadelphia, Pa.—Col. Bradley Dewey's address is now 19 West 44th Street, New York, N. Y.—Egerton M. Bettington is now a major in the Royal Flying Corps, B. E. F.—Kenneth T. Blood has been promoted to the rank of major, and is now stationed at Fort Totten, N. Y.—Maj. C. D. Jacobs was in Boston last month and called on the secretary. "Jake" is now in the office of the chief of engineers, Washington, D. C. A short time ago his engagement to Miss Elsie T. Darby of Germantown, Pa., was announced.

It is with regret that the secretary records the death of the third member of '09 to die in service. Harold Schaffer, sapper, 6th Field Company, Canadian Royal Engineers, killed in action in France, October 29, 1918. Details of Schaffer's death have not yet been received.

Further acknowledgments of the Christmas greetings sent to the men in service have been received. Among them is a letter from Riojo Ohnuki which we print in full, as being of especial interest, coming from so far away. Ohnuki is now stationed at the Sasebo Naval Dockyard, Japan. He writes:

Many thanks for your kind letter which extending to me your cordial greetings of the Christmas. In same way I also send to you my hearty congratulation for your good health and happiness, and I beg to you as the president of the class 1909 to give my sincere wishes to our classmates in America who are directly serving to your country and allies.

For your request, I should write to you fulfill the " list."

At the war in (1914) Tingtau, China, where is one of colonies of German; I took a part as one of mechanical engineer on board of a repair ship of Japanese navy with the rank of engineer commander. In the year of 1916 to 1918, I stayed at Italy as an inspecting engineer to inspect aeroplane and submarine engines for the Japanese navy and at present I am serving in our navy as a chief engineer in designing department of Sasebo Naval Dockyard, Japan. Lately, on the 1st December of this year, I have been promoted to the rank of captain in the navy, and also was decorated by our emperor and Italian king.

Again expressing my sincere wishes to you and your all,

Yours very sincerely,
RIOJO OHNUKI

P.B. Please find a photo of my girls enclosed here.

(I wish you all could see the photograph of his charming little daughters.—C. R. M.)

Captain Perry writes from Blois, France, under date of January 18, 1919, that is " commanding an office force of about one hundred who classify, inspect, delouse and equip all men passing through this station on the way to the United States. Major Riefkohl has just arrived here as adjutant of the post, so that we have a nucleus, though a very small one, for an '09 gathering."

On the back of the " Greetings," L. C. Eddy writes to Gram:

TO THE CLASS OF 1909

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

On the U. S. S. " Missouri "
Lloyd Eddy sails the sea,
He passed the Ensign Training Course,
At Naval 'cademy.

Though engineering duties now
Oft call him from the deck,
He still recalls old " Oughty Nine "
And former days at Tech.

—LLOYD CHAMPLIN EDDY.

Guess we'll have to elect Eddy the poet laureate of the class.

In order that the list of men in the class in service may be available to all, and so that it may be corrected, and any missing names added, we are printing the complete " Roll of Honor " of the class. Kindly advise the secretary of any changes.

ROLL OF HONOR

CLASS OF 1909, M. I. T.

Lieut. Thomas A. Tillard, Royal Flying Corps, B. E. F., killed in France, December 6, 1916.—Capt. Ernest A. Ware, 506th Engrs., A. E. F., died of pneumonia, October 11, 1918.—Lieut. Harold Schaffer, sapper, 6th Field Co., Canadian Engrs., C. E. F., killed in action in France, October 29, 1918.

MEN IN SERVICE

Lieut. Raynor H. Allen, 308th Engrs.— Capt. Frank D. Applin, Coast Artillery Corps.— Capt. Thomas H. Atherton.— Corp. Howard P. Belknap, 151st Depot Brigade, 76th Division, A. E. F.— Maj. Egerton M. Bettington, Royal Flying Corps.— Francis H. Bishop, Co. K, 301st Inf., 76th Division, A. E. F.— 1st Lieut. Thomas B. Black, 338th Field Artillery, A. E. F.— Capt. William P. Blodgett, 17th Co., Coast Artillery Corps.— Maj. Kenneth T. Blood, Coast Artillery Corps.— 1st Lieut John C. Bollendocker, 75th Aero Squadron, S. C.— Lieut.-Com. Lee S. Border, Construction Corps, Navy Dept.— Maj. Samuel Cabot, Jr., 151st Depot Brigade, 76th Division, A. E. F.— 2d Lieut. Ballard Y. Burgher, Aviation S. C., 1st Training Brigade.— Field Clerk Kenneth E. Carpenter, Eng. Corps at large, A. E. F.— Lieut.-Col. Clifton C. Carter.—2d Lieut. Laurence D. Chapman, 61st Coast Artillery Corps, A. E. F.—John A. Christie.— Lieut. M. S. Clark, Co. C, 308th Inf., 77th Division, A. E. F.—Capt. William D. Clark, 5th Cav.—Lieut.-Col. Chauncy H. Crawford.—Capt. Francis C. V. Crowley, 5th Cav.—Col. Bradley Dewey, Chemical Warfare Service.—Maj. A. L. Dickerman. Jr.—Ensign Howard H. Dole.—2d Lieut. Henry W. Dun, Jr.—1st Lieut. Henry C. Drown, 101st Engrs., 26th Division, A. E. F.—2d Lieut. Lloyd C. Eddy, R. D.— 1st Lieut. Herbert C. Elton.— Raymond H. Fellows, Co. F, 101st Engrs., 26th Division, A. E. F.—Ensign Frederic A. Fenger, U. S. S. "Chester."—1st Lieut. W. Craig Ferguson.—Montague Flagg, 2d., U. S. Navy.—R. C. Glancy.—1st Lieut. William S. Gordon, Jr., A. S. S. C.—Lieut.-Col. Fred M. Green.—2d Lieut. William D. Green, Mach. Gun Training Center.—1st Lieut. Arthur E. Hartwell.—Lieut. John M. Hatton.—1st Lieut. Harry L. Havens.—1st Lieut. Frederick M. Heidelberg, Insp. of Ord.—1st Lieut. Armin F. Herold.—Com. Herbert S. Howard, Constr. Corps, Navy Dept.—Maj. Carlton D. Jacobs, office of Chief of Erngs.— Sergt. Herbert L. Jenness, Supply Co., 72d Inf.—Capt. Reginald L. Jones, Signal Corps.—Capt. Arthur C. Judd, 310th Inf.—Sergt. Robert C. Kerr. —Lieut. Walter W. King— 1st Lieut. Christian Kurtzmann, Co. D, 303d Motor Supply Train, A. E. F.—2d Lieut. Robert C. Latimer.—Maj. Paul H. Lazenby, 2d Pioneers.— 2d Lieut. Hugh J. Lofting.—1st Lieut. Lynn A. Loomis, Gas Defense Service, Line of Communication, A. E. F.—Capt. Frank S. McClintock.—1st Lieut. Andrew J. Manson.—Thorndike DeV. Martin, Detachment A, 2d Bn.—2d Lieut. David P. Marvin, U. S. S. "Denver."—Capt. Riojo Ohnuki, Imperial Japanese Navy.— Lieut.-Com. J. E. Otterson, Constr. Corps, Navy Dept.—Russell H. Nichols, Avia. Sec., Signal Corps.—Capt. George T. Palmer.— Capt. F Gardiner Perry.— Capt. Henry R. Putnam, Gen. Engr. Depot.—Lieut. Charles W Radford.—Maj. Rudolf W. Riefkohl, 63d Artillery.—Lieut. Clark S. Robinson.— 1st Lieut. A. M. Rosenblatt, 33d Engrs.—1st Lieut. Edward L. Ryerson, Jr., Signal Corps.—1st Lieut. Maurice R. Scharff.—Capt. Franz J. Schneider.—Capt. Arthur L. Shaw, Co. E, 301st Engrs.—1st Lieut. Xanthus R. Smith.—Francis H. Soderstrom, Co. B, 27th Engrs.—1st Lieut. A. H. Straus, E. Stationary Laboratory No. 1.—1st Lieut.

Stuart Thomas.—L. J. Towne.—Capt. Arthur H. Turner, 6th Marine Regt., A. E. F.—1st Lieut. Willard B. Van Inwegan, Co. C, 23d Engrs., A. E. F.—E. E. Wells.—Capt. Lyman F. Whitney.—1st Lieut. P. M. Wiswall.—Lieut. Frederick B. Wood.—Chief Yeowoman Rebecca N. Thompson, Navy Yard.

The secretary has recently received a card from A. S. Peet, who is now with the Knoxville Globe Company, Knoxville, Tenn.

John N. Boyce, since August 15, 1918, has been chief draftsman of the Experimental Department, Goodyear Tire and Rubber Company, Akron, Ohio. There are several other Tech men in the same department.

John L. Bray sails shortly for Honduras where he has accepted a position as mine superintendent. His address will be Saberia Grande, Honduras, C. A.

Homer C. Bender has been appointed as the first superintendent of public utilities of Spokane, Wash., by Mayor C. M. Fassett. His duties will include the making of personal investigations, gathering data, inspecting utility work under way, and in preparing for rate and other hearings before the Public Service Commission. Bender formerly was with Stone & Webster.

The secretary is very happy to announce the birth of Doris Woodman Main, on March 22, 1919.

1910

Dudley Clapp, Secretary, care Gorton-Pew Fisheries, Gloucester, Mass.

Remember the new address—Gloucester, Mass.—and write early and often! As you know, your secretary has been in the service since the summer of 1917 and unable to perform any secretarial duties, so that all that was done in that way for 1910 was due to the efforts of my father who sent our notices, had the class blotter printed, and did what he could toward keeping up the class news in the Review for a year and a half. However, now that the guerre is fini (for me, at least) and I have a position in Gloucester that doesn't call for much travelling round, you may expect a little better service from your secretary, especially if you will drop a line, even a postcard once in a while and say that you're alive.

The announcement was made of the engagement of Miss Mary Waters to J. Stuart Sneddon. Mr. Sneddon is a member of the Phi Gamma Delta fraternity. He is associated with the Babcock & Wilcox Company, Barberton, and makes his home at Anna Dean Farm.

Stillman Batcheller, III, is 1st lieutenant, Co. 6, E. O. T. C., Camp Humphreys, Virginia.

J. R. Longyear, Jr., is 2d lieutenant, Coast Artillery, O. R. C.

Mr. and Mrs. Loren N. Downs, Jr., of 626 Ember Crescent, Westfield, N. J., announce the birth of Loren N. Downs, 3d, on December 31, 1918.

The following letter from Carleton Piper is dated December, but has not before been published:

> Since April 30 I have been stationed in this city as a sergeant in the Chemical Warfare Service. The government has erected a splendid plant here for the manufacture of poison gas, and until the armistice was signed, we were turning out gas shells at a very fast rate. My particular job has been that of shift chemist, which to me has been very interesting work, although it kept one hustling.
>
> I have not met a 1910 man for several years. Most of the men here are Ohio

State graduates, and I have not as yet had the pleasure of meeting a Tech man in this locality.

I am looking forward to receiving my discharge from the United States Army within a few days now. I shall probably re-enter the employ of the George E. Keith Company of Brockton, Mass., manufacturers of the "Walk-Over Shoe" for men and women. I had been with this concern for two years prior to my enlistment in the service, and was well pleased with my work and prospects there.

In mentioning statistics might state that I am still a "bachelor," but that I am "already spoken for" by a former Dorchester young lady.

I wish to express my best regards to all my old chums in the good old class of "Mitten."

Carleton Piper is now out of the Chemical Warfare Service and is in Randolph Mass.

The following clipping from the "Transcript" is interesting:

> Saul, Tom W., 1st lieutenant, Tank Corps. For extraordinary heroism in section near the Bais de Lemieres, France, September 12, 1918. Lieutenant Saul coolly exposed himself to enemy fire by standing on the parapet of a trench and directing his men in the work of getting the tanks forward. Home address, Mrs. Tom Saul, wife, 440 East 17th Street, Portland, Ore.

I met Tom Saul in St. Nazaire in December, 1917. He went over in August of that year with a railway engineering unit from the west and afterwards was transferred to the tanks.

The funeral services of the late Chester Jackson Briggs, who died of pneumonia at El Paso, Texas, were conducted by the Dalhousie Lodge of the Masonic Order at the home of his parents, Mr. and Mrs. Charles C. Briggs of Newtonville, Mass., this afternoon at 1.30.

Mr. Briggs was born in Newtonville December 20, 1884, attending the Newton schools until graduating from the Newton High School in 1903. He entered Yale College, but ill health obliged him to leave at the end of his second year. He did not return to Yale, but in 1907 entered the Massachusetts Institute of Technology, completing the four years' course in three years, graduating as a mining engineer. He immediately entered the employ of the American Smelting and Refining Company, in the department of mining metallurgy in Mexico. For the past eight years his professional experience has been devoted to the specialty of ore concentration in which he was recognized as an expert, and he was achieving a brilliant success until disturbed conditions in Mexico caused suspension of operations. He was assistant superintendent of the concentrator at the Tecolotes Mine of the American Smelting and Refining Company at Santa Barbara, Chihuahua.

For the past three years he has resided in El Paso, Texas, and has been engaged in experimental and research work in ore concentration and in mill design, for the same company. His most recent work was the design of a plant for the concentration of molybdenum ores by flotation, which was erected and is now operating at the El Paso smelting works.

In 1911 he married Miss Elizabeth Balfour of Allston, Mass., who, with a young daughter, survives him.

News of the death of Harrison L. Clough of Merrimack, N. H., has been received with no details.

The du Pont Company sent word to the TECHNOLOGY REVIEW office that David A. Stoddart, VI, died October 9, 1918.

Frank Bell, II, is now captain, A. S. A., U. S. A., Gerstner Field, Louisiana. — Herb Cleverdon, IV, is lieutenant, 104th Engineers, 29th Division, U. S. A., and at last accounts was still in France. Let's hope he's fighting the battle of Paris.

Lieut.-Col. Frank D. Applin, VI, is at Fort Ruger, Honolulu, Hawaii. We have another high ranking officer in the class—Dick Almy of the Chemical Warfare Service, who is also a lieutenant-colonel.

From various papers the following items about 1910 men have been gathered:

Capt. William F. Wills, VII, is in the Sanitary Corps, U. S. A., and is engaged in general water supply work in central France with headquarters at Tours. His address is Water Supply Laboratory, D. C. and F., A. P. O. 717, A. E. F., France.

Louis O. French, formerly a member of the firm of Morsell, Keeney & French, has severed his connection with that firm and is now associated with Richard S. C. Caldwell in the practice of patent law and soliciting of patents at 815 Majestic Building. Mr. French was formerly assistant examiner in the patent office, and has been a member of the bar of Wisconsin for some years.

Lieut. Edward S. Howe, Engineers, U. S. A., following his discharge from the army, will proceed to the Philippine Islands, where he will act as a commercial engineering representative of the Westinghouse Electric and Manufacturing Co. Lieutenant Howe was born in Kingston, Mass., and was graduated from the electrical engineering course of the Massachusetts Institute of Technology in 1910. After a period of service in the shops and Boston office of the Westinghouse Company, he spent two years at Medillin, Colombia, S. A., returning to the States early last year to enter the national service.

About a score of '10 men showed up at the alumni dinner on March 1, and had a pleasant reunion, although we couldn't all sit together. Larry Hemenway was in his ensign's uniform of Naval Aviation, which he was soon to leave off. We all agreed that it is time to get busy with the plans for the decennial reunion. It doesn't seem as if we were as old as that, but the time is coming and we must make it a worth while time.

Unfortunately, I did not get all the names of those present at the dinner, but the following are some of them: R. W. Jacoby, L. T. Hemenway, Charles E. Greene, W. J. Pead, Jr., Charles W. Wallour, G. G. Holbrook, J. B. Babcock, H. M. Schleicher, Ralph L. Beals, Carroll H. Shaw, Carl J. Sittinger, Arthur H. Curtis.

1911

ORVILLE B. DENISON, Secretary, 63 Sidney Street, Cambridge A, Mass.

HERBERT FRYER, Assistant Secretary, Room 506, 10 State Street, Boston, Mass.

ADDITIONAL 1911 SERVICE MEN

MERRILL, L. M., Course V, Pvt., Gas Defence, C. W. S., U. S. A.

PEASE, R. S., Course V, Pvt., Gas Defence, C. W. S., U. S. A.

WOODWARD, E. L., Course VI, Sergt., 35th Co., Trans. Corps, 15th Division, A. E. F.

There are now, your secretary believes, one hundred and eighteen (118) stars in the 1911 Honor Roll. When the returns are all in and the final chronology of 1911's record in the Great War is in shape, that number will doubtless be larger, but one hundred and eighteen seems like an irreducible minimum.—In a recent letter from L. M. Merrill he stated his service record as follows:

Enlisted April 9, 1917, in Co. H, 1st Inf., Ohio N. G.; received warrant of corporal June 5, 1917; transferred October 17, 1917, to Co. C, 147th Inf.; transferred January 1, 1918, to Co. D, 147th Inf., transferred May 8, 1918, to Sanitary Squad A, 112th San. Train with reduction to private; transferred June 1, 1918, to 40th Co., 10th

Tr. Bn., 157th Depot Brigade to await assignment as chemist in C. W. S., transferred August 14, 1918, to Edgewood Arsenal, Edgewood, Md., working there as chemist till end of war; sent to Camp Sherman, Ohio, for discharge; discharged January 11, 1919.

R. S. Pease says he was a private in the same service (Chemical Warfare Service) in which C. R. Johnson was a major and continues to say, "Far be it from the major to ever see the private, but then, maybe he didn't know me behind my beard, which they say is a good camouflage."—The first inkling the secretary had that Edgar Woodward was in the service was a letter received from him in mid-March, in which he said in part:

> Am situated at Gievres, an important railroad center in France, and hold the rank of sergeant in the 35th Co., Trans. Corps. My work at the round-house is that of machinist on locomotive repair work. We are all well and anxious to get home. Best regards to all the boys.

Another gold star is in the 1911 service flag, this one for another classmate who gave his all " over there." The following clipping from the Oshkosh, Wis., " Daily Northwestern " of January 4 tells the story:

> Mr. and Mrs. Frank Metz, 260 Ceape Street, have been officially advised of the death of their son, August C. Metz, who passed away December 21, at Base Hospital No. 8 at Sarenay, France, as the result of complications following pleurisy. He underwent an operation for pleurisy November 3 and was supposed to be making a good recovery. In fact, a letter written by him December 8 stated that he was improving well and hoped soon to be sent home.
>
> The young man was born in this city May 1, 1889, and was therefore a little less than thirty years of age. He was graduated from the Oshkosh High School in 1906, being valedictorian of the class. He then entered the Massachusetts Institute of Technology, from which he was graduated in 1911. Upon graduation he entered the employ of the American Smelting and Refining Company, as assistant engineer, and was assigned to their mining unit at Velardena, Mexico. He was superintendent of the Reforms mining unit when he resigned in June, 1918, to answer his country's draft call. He left Oshkosh in July for Camp Grant and made application for the Engineer Officers' Training School, pending which he was attached to the 36th Medical Replacement unit. He went overseas in September and was in service as a private in the base hospital when he was taken ill.
>
> The news of the death of " Gus " Metz caused a pang of sorrow to a large number of friends in this city. He was not only a good student but a young man of unaffected simplicity and kindly hearted sympathy, and Principal A. B. O'Neil, under whom he was graduated, expressed deep regret that so brilliant a mind and so fine a character should be called from earth at so early an age. It is said of him also that not the least of those who will miss him will be the several hundred Mexican miners and their families with whom he labored unarmed but unharmed during the troublesome years of revolution and starvation. Although a mere boy, he was affectionately called " the old man " both at college and at the mines.
>
> Besides his parents, Mr. Metz is survived by one sister, Marie, of Omaha, Neb., four brothers, William, who is with Company C, 337th battalion, tank corps, in France, and Bernard, Rudolph, and Ernest Metz, all of this city

Your secretary has already expressed to his parents the genuine loss sustained by our class in the passing of " Gus " Metz.

Capt. " Ted " Parker, I, blew in to see the secretary in mid-March, just back from France with the 26th Engineers. He is the picture of health and said it was certainly good to be back in the Hub, where he has scarcely been at all since graduation. He is going back with the Electric Bond and Share Company, but will work from their New York office instead of returning to Utah.—From his father the secretary has learned that Lieut W. C. Davis, Jr., I, Co. A, 305th Engrs, 80th Division,

A. E. F., was severely wounded in action November 1, 1919, in the Argonne-Meuse offensive. Hope he's fit again by now!—1911-ers may well be proud of the showing of her members in the Gas Defense, C. W. S., for among the eight Tech men who became majors, four of them—exactly 50 per cent — were 1911-ers, viz., Maj. C. R. Johnson, in charge of the Technical Section; Maj. I. W. Wilson, in charge of carbon manufacture at the Astoria plant; Maj. J. C. Woodruff, in charge of the Chemical Manufacturing Development Section, and Maj. T. L. Wheeler, in charge of the chemical development work at Astoria. Other '11-ers to obtain commissions were Capt. W. H. Coburn and 1st Lieut. Joseph C. Fuller. Fine work, boys!—1911 visitors at the Tech Bureau in Paris since the signing of the armistice have included: W. C. Davis, Jr., D. C. Barton, Edward Kenway, J. L. McAllen, T. S. Killion, M. C. Kinney, C. P Kerr, Louis Grandgent, W. D. Foster and J. O. Greenan. The last-named in a letter written February 25 says that " the Bureau does more to make us feel at home here than any other one thing, and that is largely due to the personality of Gibbs—the ideal man for the job." Greenan at that writing had just finished a month's work on the mine section of the Peace Commission and hopes to be home soon.—Sergt. Oliver D. Powell, Battery F, 309th Field Artillery, A. E. F., wrote a splendid, breezy letter on New Year's Day and lack of space alone prevents its appearance in full, and the same applies to a corking, characteristic letter written three days later by Lieut. Carl G. Richmond, Co. A, 605th Engrs., A. E. F. Powell said in part:

> I was with my battery as instrument sergeant through the St. Mihiel drive but left them to attend the O. T. C. at Saumur Artillery School toward the end of September. In May I turned down an opportunity to attend an O. T. S. in the States, preferring to come to France quickly. In August I preferred seeing action at the front to going to school. So, although thereby I lost the chance to get a commission before the armistice was signed, I waited until after I had been in battle before I went after the bars.
>
> We who successfully completed the school December 21 hope eventually to receive our commissions. " Zeke " William (an ex-'11-er) was a loser by the same ruling. " Dick " Ranger was a captain at the school and in charge of the course in military signalling. Both Zeke and myself were specializing in G. P. F's and would have probably gone into heavy artillery if the war had continued.

That's good spirit, the secretary'll say!—Carl Richmond said in part:

> Good stuff, that blotter dope! At that portentous moment—the 11th, 11th-11th, this 11-er was in Chalindrey, Haute Marne, France, expecting to go into the front lines just four days later. Just now I am at the headquarters of the 8th Corps, First Army, and as our captain is away I am C. O. of Co. A, 605th Engineers. Our immediate work consists of erecting some barracks and stables for the corps troops.
>
> Our work in the army has been a lot of fun in a way, and although it has cost me a bit one way and another with the decrease in salary and all that, still if I had it all to do over again, I would be in even sooner than I was.
>
> About November 5 or 6 I met Maj. C. R. Johnson, '11, of the C. W. S. in Chaumont at the A. E. F. Gas School. He had just come across and was looking up some pointers on gas-mask manufacture. Think he is the only 1911 man I have met over here. I used to be in the same outfit with Jack McAllen, '11, but I have not seen anything of him since June although I know he is only a short distance from here towards Germany.

Lieut. " Jack " McAllen, III, is with the Army of Occupation and wrote under date of February 4:

> Am stationed now at Kirsch on the Moselle River about ten kilometers below Frier, in charge of a detachment of fifty men, eight trucks and eighteen truck drivers. We run the town and none may stir without the permission of his mightiness—myself. Be that as it may my responsibilities rest lightly on my shoulders.

> I've had a leave of absence during which I visited Paris, Bordeaux, Cette, Marseilles, Nice, Monte Carlo, Lyon, Dijor, Nancy, Metz, Luxemburg and a lot of small towns. Altogether a very salubrious time.
>
> Remember me to any of the 1911 men you run across. I'll try to get up to see you all before I go back to Alaska.

Another '11-er in Germany is Lieut. T. S. Killion, who in February was in Neuwied with the 2d Division. In his characteristic breezy style he writes:

> A long lost REVIEW for November rolled in here today and it was good reading. Also a note from you ist gekommen about dues. I send you my dues, for "spend your money and sleep in the streets" is the idea. However we are not sleeping in the streets by a long shot these "ruff" days. Mister Deutscher comes across with the "Besser oder am besten zimmers" that he has and we crawl in, bag and baggage.
>
> Things are so so. The game is over and I can see where this "Peace War" is going to be hell. Hence we are looking for the day when we get some trip to another area—say four thousand miles west of here. Here's to the day when we walk up Boylston Street or down Tremont.

M. R. Thompson, XIV, has been discharged and is now doing metallurgical engineering work in the largest copper refinery in the world—the Baltimore Copper Smelting and Rolling Company's plant in Baltimore.—Robert E. Anderson, III, is also discharged from service and is back at his old stand in Cincinnati. He was a second lieutenant in Field Artillery at Camp Zachary Taylor.—Welcome indeed was a recent letter received by the secretary from Ove Collett, III, who is an engineer under his own "shingle" in Kristiania, Norway. The note was a mere formality, with class dues enclosed, but the secretary was glad to hear from our Norwegian classmate.—Franklin Osborn has accepted a position with the Eustis Mining Company, Eustis, Quebec.—"Boz" Bogdasarian is still with Carnegie Steel Company in Newcastle, Pa., and says the plant had so much war work that he was shifted from Class I to Class II in the draft.—Here is an interesting letter just received by the secretary from Mayo Tolman, '13, who is linked with 1911 through his marriage to Miss Ruth Dunbar, '11. Tolman said:

> You may recall Ruth Dunbar of the class of 1911. We were married in January, 1914, and in April, 1915, our first boy was born. March, 1917, a second youngster arrived. This little fellow, who bore promise of being a very bright and likable youth, was drowned in the Kanawha River January 10. His older brother felt the loss so keenly that Mrs. Tolman decided to go north to her home in Brookline in order to take the youngster away from the scenes that reminded him so much of his brother. Ruth is now studying pathology and advanced bacteriology at the Brooks Hospital and the Massachusetts State Department of Health. Her idea is largely to be of service to the new firm of Pierce & Tolman, Incorporated. James B. Pierce, Jr. of your class, who has long been here in Charleston as chief chemist of the Rollin Chemical Company, and I incorporated last Saturday as a firm of chemical and sanitary engineers. In a few days I will send you one of our letterheads and a prospectus showing the type of work we plan to undertake.
>
> J. B. is blossoming out into a promising golf champion. Yesterday we played thirty-six holes and I am sure he didn't lose more than a dozen balls and he didn't happen to catch anybody in the back of the neck on a wild drive. Let's hope Pierce & Tolman don't catch it in the neck either.

At last your secretary has learned where J. B. Pierce is!—Here's an announcement joyfully received by friend secretary:

> Mr. and Mrs. Donald N. Frazier announce the birth of a daughter Elinor Martha, born the seventh day of March, 1919.

Arthur W. Carney, III, died at Tampa, Florida, October 24, 1918. Word was received from Edward M. Carney, February 24, 1919.

Here's what the "Boston Herald" said on February 21 about "Gutzie" Barker:

> With the opening yesterday at 18 Tremont Street of a professional and special section by the United States employment service, business men throughout New England are afforded an opportunity to obtain highly educated and experienced men and women, especially equipped to meeet their particular needs, free of charge.
>
> Charles M. Barker, a graduate of the Massachusetts Institute of Technology, heads the section, co-operating with Everett W. Lord, the federal director. The Boston office, in addition to caring for this city and state, is also in charge of placing applicants in Maine, New Hampshire, Vermont and Rhode Island who cannot be immediately placed in their home states.

Seems natural to have him back in Boston.—Here's another 1911 business venture, this time by Roy MacPherson, II, a "townie" of the secretary's. This clipping is from the Framingham "Evening News," of March 22:

> Framingham is to have another first-class garage and automobile salesroom and good judges who have seen the plans say it will have no superior, if any equal, between Boston and New York. A corporation has been organized under Massachusetts laws for the conduct of the business. Ex-Senator James E. MacPherson has acquired the property and Roy G. MacPherson and P. B. Chatterton are the controlling factors in this new enterprise.
>
> Roy G. MacPherson graduated from the Framingham High School and received his degree of bachelor of science from the Massachusetts Institute of Technology in the mechanical engineering course, eight years ago. Since then he has had a wide experience as efficiency engineer and consulting engineer for various large manufacturing concerns, much of his time having been spent upon internal combustion engines.
>
> The team looks to be a strong combination and they have entered upon the project only after the assurances of a large circle of prospective patrons. They say their watchword will be "Service."
>
> The corporate seal and articles of incorporation show the real estate holding company to be named the Framingham Garage, Inc., while the name of the operating company is the Framingham Motors Company.
>
> Building operations will commence in a few days and the new building will be pushed to completion with all possible speed, to accommodate the business already in hand.

There were twenty-nine 1911-ers at the annual dinner of the Alumni Association at the Walker Memorial on March 1, as follows: Barker, Buckley, Clark, Coupal, Cumings, Curtis, Denison, Dolliver, Dyer, Estes, Fryer, Haines, Hall, Jenks, Lake, Leary, McManus, McNeil, Osborn, Pead, Romer, Shohan, W. J. Simonds, Van Tassel, Wade, P. V. Wells, Wilkes, F. A. Wood and R. O. Wood. The boys reminisced diligently throughout the dinner, the secretary missing this opportunity on account of being busy with the musical end of the program.—When you come back from France, if you hit the Hub, just call up Dennie at Cambridge 6700 or Belmont 1028-W, won't you please? Also, wherever you are, "W. T. D." Thank you!

CHANGES OF ADDRESS

R. Y. Althouse, 4257 N. Lockwood Avenue, Chicago, Ill.—Lieut. Robert E. Anderson, 307 Broadway, Cincinnati, Ohio.—H. E. Babbitt, 204th Engrs. Hall, Urbana, Ill.—Lieut. Olin V. Chamberlin, 603 North Main Street, Washington, Pa.—Ove Collett, Munkedamsvei 27, Kristiania, Norway.—Mitchell Coffin, Niagara Falls, N. Y.—Marshall E. Comstock, 9 Brooks Street, West Medford, Mass.— Albert L. deRomaña, 117 Brandywine Avenue, Schenectady, N. Y.—J. H. Dunlap, 17 Rhodes Avenue, Akron, Ohio.—Rudolph Emmel, 6 Olenside Avenue, Jamaica Plain, Mass.—George H. Estes, 196 Bates Street, Lewiston, Me.—Thomas H. Haines, 39 Elder Street, Dorchester, Mass.—Capt. John A. Herlihy, 11 Kowin Street, Dorchester, Mass.—Bancroft Hill, 13 East Read Street, Baltimore, Md.—H. P. Ireland, 60 Rolatary Avenue, Binghamton, N. Y.—Harold G. Jenks, 389 Essex Street, Salem, Mass.—Lieut. T. S. Killion, Headquarters, 2d Division, A. P. O. 710, A. E. F.—C. A. Magoon, Riverdale, Md.—L. M. Merrill, Glendale, Ohio.—Capt. T. B. Parker, 71 Broadway, care Electric Bond and Share Company, New York City.—Ralph S. Pease, 297 Grove Street, Fall River, Mass.—J. B. Pierce, care Pierce & Tolman, Inc., Charleston, W. Va.—Sergt. Irving R. Pray, Central Tinguaro, Perico, Cuba.—John H. Scoville, 3 Cottage Street, South Orange, N. J.—F. G. Smith, 108 Field Street, Torrington, Conn.—W. W. Warner, Box 157, Nowata, Okla.—W. C. West, 14 East Jackson Boulevard, Chicago, Ill.—Ensign Robert O. Wood, 11 Lowell Road, Concord, Mass.

1912

RANDALL CREMER, Secretary, 7 The Circle, Rochelle Park, New Rochelle, N. Y.

Theodore R. Prouty, IV, died in France at General Headquarters, on September 24, 1918, word was received from the War Service Auxiliary January 29, 1919.

The Boston "Transcript" of March 1, 1919, prints the following:

> Mr. and Mrs. J. S. Starr of 15 Orange Street, Waltham, have just received a cable message informing them of the accidental death of their son, Frank E. Starr, a mining engineer in Chuquicamata, Chile. Mr. Starr was twenty-seven years old and was a graduate of the Fitchburg High School and the Massachusetts Institute of Technology, class of 1912. Besides his parents Mr. Starr leaves a wife and an infant child, a sister, Mrs. R. S. Dolber, and two brothers, Herbert W. Starr and Harry A. Starr, the latter in the United States Army of Occupation in Germany.

G. S. Witmerin, Chuquicamata, Chile, writes under date of February 27:

> I regret to have to inform you of the death of Frank Starr, yesterday morning as the result of an accident. He is survived by a widow and small child.
>
> As far as I have been able to learn he was thrown from his horse in front of an approaching ore train, falling between the rails. The brake beam of the first car struck him on the head as the train was brought to a stop. Death was, I believe, instantaneous.

George B. Brigham, IV, is instructor in drawing and descriptive geometry at Tufts College. His home address is 57 School Street, Dedham, Mass.

Richard P. Wallis, I, has been engaged in engineering work in Albany, Cleveland, Minneapolis and in the United States War Department, Construction Division.

1913

F. D. MURDOCK, Secretary, 483 Crescent Avenue, Buffalo, N. Y.

ARTHUR W. KENNEY, Assistant Secretary,
3511 Lowell Street, N. W., Washington, D. C.

From our most pleasing correspondent, Mayo Tolman, we learn of the achievements of Geoffrey Thayer. In speaking of him Tolman says:

I never have heard such nice things said of any one as people say about him. I know a lot of the Norfolk & Western officials and they state they lost one of their most promising men. Everybody in Bluefield feels that they have lost one of their most promising citizens.

Mayo was appointed chief engineer of the Syrian Relief Commission doing work in Syria, Turkey, Armenia and Persia and southern Siberia. Death by drowning of his youngest boy was the reason for his giving it up. We are pleased to print one of his recent letters.

You will be sorry to learn, I know, that on the 10th of January Ruth and I lost our youngest boy by drowning. The little fellow with his older brother wandered over to the river to watch the steamers go by. The littler fellow got into a boat that was moored at a dock. When he came to get out the boat pushed away and let him into the water. His older brother, who is but slightly over three and one-half years old, waded into the ice cold water up to his neck to get the little fellow. A colored man who heard him crying came down and pulled him out but absolutely lost his head and left the little fellow in the water still struggling, though he was not out beyond the waist of the colored man in depth. The colored man brought the older boy home and when Ruth asked him where the little fellow was he said, "In the river drowned." Ruth rushed over and found him face down caught in some bushes. She worked on him for more than three and one-half hours but to no avail. His loss has been a very great blow to both of us because he was as sweet a child as I ever expect to see. We have, however, one very great consolation due to a splendid act of our truly wonderful governor.

Last fall I secured a Baltimore & Ohio Railroad passenger coach and fitted it out as a traveling health exhibit. In one end is a small laboratory for general diagnostic work, bacteriological and chemical examinations, together with a gasoline engine and dynamo to furnish power to run a motion picture machine and operate many of the models which are mechanical. The Board of Public Works absolutely refused to allow a cent for the operation of the car, this despite the most urgent appeals on the part of the governor, the health commissioner and myself. The result was the very morning the little fellow was drowned we had advised our man in charge of the car to look for a new job that the car would be abandoned in a comparatively few days. However, the moment the governor heard of Martin's death he called a meeting of the Board of Public Works and told them that I had spent three and one-half years in West Virginia and had saved many lives through my work but that now I had lost a life more dear to me than any. He went on to tell them that this health car was one of my pet projects and that he wanted them to appropriate funds to operate it as a memorial to Martin. He further told them that just so fast as they adjourned he would call them together again until the necessary funds were made available. As a result nearly thirty thousand dollars have been appropriated for the use of the car. Both Ruth and I feel that his death probably has been a great blessing to the people of this State, though it certainly has been a hard blow to us.

The Technology Club of West Virginia has had some very live meetings. A couple of weeks ago I gave them a talk on the Red Cross in Guatemala, illustrated by lantern slides and motion pictures. Many of the members brought their wives and sweethearts—among the latter was R. D. Bates of our class. He has been working at Nitro and lost his heart while there. I suppose it is only a question of a very brief time before he too joins the benedicts.

Mrs. Tolman is in Boston at the present time studying pathology. It is my plan to cut loose within a brief year or so and go into consulting sanitary engineering work. She is going to handle bacteriological and pathological work for the doctors. Must close now with best wishes to you and all my other classmates.

P.S. You might be interested to know that I recently was offered the position of chief engineer of the Syrian Relief Commission doing work in Syria, Turkey, Armenia and Persia. I refused on account of Martin's death.

Since receiving the above letter we have heard that Tolman and James B. Pierce Jr., class of 1911, have incorporated and opened an office as consulting chemical and sanitary engineers. The prospects for the concern are very bright and we surely wish the boys all success.

Back in January bashful Ralph Rankin, VI, confessed to the secretary that he had been married on November 30 to Miss Constance Flood. It is the secretary's pleasure to know the estimable young lady and Ralph is to be congratulated. The couple have our best wishes for happiness. Ralph has been released from the navy and is back at work for the American Telephone Company in New York chasing phantom circuits. For the benefit of electrical ignoramuses, we will say that this is very high grade electrical detective work.

The class boasts one major, George Richter, who by the way is back in New Hampshire and out of the service, and we would have had one more officer of that rank if the armistice had been signed a little later. Read Bill Kay's letter of February 23.

> I have not written you in so long, that I fear the fellows of '13 may have almost forgotten me, and I have sufficient love for the class not to wish that. I never miss a number of the class news, and it is most interesting to note the fellows who are getting ahead. We were not such bad guessers anyway.
>
> As you may remember, I left the Brooklyn Edison Company about three years after graduation, giving up the position of Power Engineer to go into the banking business with S. W. Straus & Co. of New York. At the time of our entry into the war I was manager of the Loan Department of that concern, and on September 5, 1917 accepted a first lieutenancy in the Gas Defense Division. I use the word "accepted" as that seems to be the proper army term. In July, 1918, the Gas Defense Division was taken over into the Chemical Warfare Service, with Colonel Walker head of the Offense, and Col. Bradley Dewey, (son of Professor Dewey) head of the Defense. We then moved our headquarters to New York, where I was made a captain and designated Officer in Charge Contract Department. On November 11 we had the pleasure of cancelling between $95,000,000 and $100,000,000 worth of contracts, and the work of adjusting these, was taken over by a new department, the contract adjustment section of which I was made chief.
>
> Associated with me in this work are Ken Blake and "Birdie" Duff, and two better fellows and finer engineers never existed. Ken is just being discharged from the service.
>
> Am enclosing you a copy of a letter from Major-General Sibert, of which I am duly proud and which I believe entitles me to full membership in a class as progressive as '13!

The letter referred to gave the information that Bill would have had his major's commission if the armistice had not occurred so early.

We wish to offer our apologies to Gordon Howie, I, for delaying printing the notice of his wedding to Ethel M. Patten at Melrose Highlands, Mass., on December 21, 1918. Please accept our belated good wishes, Gordon.

It seems too hot in this climate for Horace Lawrence, for he has already left again for Latouche, Alaska. Horace was drafted, came and did his duty and now like a faithful husband and citizen is back on the job.

W. S. Black, another miner, is out of the service and temporarily in Virginia on some sort of mining work.

Ed. C. Gere, I, is apparently chosen to be a soldier for life. He is with the regular army and now stationed at Manila, P. I., with the 9th Cavalry.

Professor Sedgewick received a post card from George Bakeman, XI, dated December 6 at Irkutsh, Siberia, giving a photograph of a trainload of American hospital supplies on the way to western Siberia from Vladivostock. A real American Red Cross train, in charge of Americans, and guarded by American "Sammies." Mr. Bakeman adds:

> I travelled on this train as far as Irkutsk, where I shall be located for the winter. Irkutsk, the finest city in Siberia and is truly Russian. Best Christmas and New Year's wishes.

Albert W. Buck, VII, has left Serbia and is now attached to the American Embassy in Paris.—William A. Bryant, I, was able last December to finish his duties with the engineering staff of the United States Housing Corporation and hurried back to Boston where he realized one of the dreams of his young life,—to be married, to Miss Etta M. Fowler.—Perry Burleigh is representing the National Fire Insurance Company of Hartford, in the State of New Jersey, looking after sprinkler risks.

We have notice of the change of address of D. E. Lewis, '13, to 5th and Fir Streets, San Diego, Cal. Some one will surely want to know what Dan is doing out there and when he reads this he will please write the secretary something about himself. When one goes that far out of his way, he ought to explain himself.

It is with genuine grief that we must print notices of the death of five classmates. Not to complain, we merely remark that the class is pretty young to suffer so severely at the hands of the Grim Reaper.

On October 3, 1918, George R. Burns, I, died. His death was followed on the 21st of the same month, by that of Henry E. Randall, Jr. On March 4 of this year we lost John K. Batchelder and John H. Wilfert, II. On December 23, 1918, Ruben Arey, lieutenant, junior grade of the United States Naval Reserve Force, was lost at sea between Portugal and the Azores.

Sidney Powers' war record is as follows: September 26, 1917, commissioned second lieutenant, June 11, 1918, active service. October 26, 1918-February 21, 1919, Geologic officer. G. H. Q., A. E. F., February 23, 1919, discharged.

John V. MacDonough, X, is second lieutenant Field Artillery, Camp Taylor. Permanent address: 67 Franklin Street, Watertown, Mass.

At the alumni dinner we were very well represented. Twenty-four men were counted at our tables. They were: Thompson, Brewster, Muther, Capen, Bryant, Gage, Eichorn, Glidden, Murdock, Merrill, Strachan, Morton, Gustin, Christie, Parsons, McLellan, Cushing, Hersom, Cairns, Hoyt, Clark, Brown, Clancy and Wells.

Charlie Thompson is with the Hood Rubber Company at Watertown. Bill Brewster is assistant superintendent of the Plymouth Cordage Company. (Walt) Muther is just back from France where he has been a pilot in the Aviation Service. Capan has just been released from the service and is associated in business with his father. Eichorn, Strachan and Hersom were in naval officers' uniforms.

It was a jolly crowd and surely time has made little impression upon the youth and spirits of these men.

1914

C. J. Callahan, Secretary, 506 Delaware Avenue, Buffalo, N. Y.

Elmer E. Dawson, Jr., Assistant Secretary,
28 Washington Avenue, Winthrop, Mass.

No report received from the secretary.

Fred E. Sauer, Jr., I, passed away January 30, 1919, death being due to influenza and double pneumonia. He was assistant engineer with Metcalf & Eddy, 14 Beacon Street, Boston, Mass. Word was received from his wife, whose address is 92 Trenton Street, Melrose, Mass.

Word has been received at the Review office of the death at sea on January 15, 1919, of Benjamin Silverman.

1915

William B. Spencer, Secretary, 527 North Grove Street, East Orange, N. J.
Francis P. Scully, Assistant Secretary, 5 Exeter Park, Cambridge, Mass.

On The Part of The Secretary.

The secretary finds it quite difficult to get news from the 1915 men; probably because of the large number who are changing from the military life back to civil life, or who are involved in the vast readjustments taking place all over the country. We hope that we shall receive a large quantity of interesting news before another writing.

We were favored by a personal visit from Everett Brigham recently in New York. Brigham has charge of the Boston office of the Weiss Steel Products Company. He has been establishing new agencies throughout the east and southeast. He had met "Jack" Dalton in Philadelphia and had found him well, happy, and quite prosperous.

Among the 1915 fellows overseas we understand that "Parm" Sabin has risen to the rank of major, and has been in France most of 1918.

Arthur W. Mudge, Jr., is a captain, 22d U. S. Inf. His permanent address is 7 Wedgemere Avenue, Winchester, Mass.—Donald A. Fowle is with the headquarters of the 101st Engineers as sergeant. He has been across since September, 1917.

James A. Tobey, 1st lieutenant in the sanitary division of the United States army has been transferred to Camp Surgeon at Wilbur Wright Field, Fairfield, Ohio, after having finished the anti-malarial work at Charleston, S. C. In that place he built about sixty miles of drainage ditches, and converted a malarial district into a healthful locality.

Your secretary is located with the White Fireproof Construction Company, New York City. He welcomes a visit from any classmate or Tech men at all times. The address of the company is in the New York telephone directory.

On The Part of The Assistant Secretary.

Owing to my presence in the navy since October, 1917, I fear that I have rather neglected my duties as assistant secretary of the class of 1915. However, as my request for inactive duty has now been approved and I expect to return to Boston in a very short time, I hope that I shall be able to resume my active interests in the class affairs and that from now on the class news will be more extensive.

Bill McEwen, course II, ensign in the Naval Aviation Corps, was transferred from Technology to Seattle upon the establishment of the ground school in that city. According to Bud Thomas, course II, who dropped in to see me here at Washington about a month ago, the Tech men get along pretty well out in that part of the country. Bud is by this time on inactive duty and probably at home in Springfield, Ohio. Sid Clark, course II, 2d lieutenant, United States Marine Corps, and who was one of the very first men who enlisted in Naval Aviation, is now back after having spent considerable time on the western front flying with the Marine Corps. I have met Elbridge Casselman, course X, quite a few times here in Washington. He has been very active in the Tech Club in this city and is now the secretary and treasurer. Allen Abrams, course V, known to fame as the manager of the Glee Club on one of its famous trips, is one of the Tech bunch that used to gather in Washington during the last six months. He was a 1st lieutenant in the Gas Defense Corps but has now returned to civil life.

Maurice Brandt, lieutenant (j. g.) was stationed at the Bureau of Ordnance

The number of Tech men who were in Washington was very large but 1915 supplied comparatively few.

Lester Morse, I, 2d lieutenant United States Army Aviation, after serving as instructor was assigned to Massachusetts Institute of Technology to take special course in aeronautics given only to a few pilots who were thought might be particularly useful on the engineering end of the flying game. I saw him about Christmas and he was then living at the Tech Chambers, just about the same as back in the old days.

Harking back to our freshman days the drop kick that won the game for 1915 was made by Johnnie O'Brien. I have not received any direct word, but rumor has it that he has been working for the United States Navy at the airplane plant of the Burgess Company, in a civilian capacity. The captain of our track team that day was Hann, his first name has slipped my memory, who unfortunately only stayed in Tech his freshman year. He is hale and hearty, and located in New York.

Mr. Joseph W. Barnwell wrote the following letter about his son, Joseph, Jr.:

> Joseph was employed a few days after his graduation by the du Pont Company in engineering work at Hopewell near Petersburg and subsequently after the work there was completed by the same company he was employed at Parlin, N. J. Desiring to obtain engineering work and not operative work which he was doing at Parlin, he accepted the position of 2d lieutenant in the Johnson Engineers, a part of the National Guard and served for nine months on the Texas border. Returning he was elected as assistant engineer to the State Highway Commissioner and upon the formation of the 117th Engineers of the National Guard was made junior 1st lieutenant of Co. A, and went with them as a part of the 42d (Rainbow) Division.
>
> He was promoted to be senior 1st lieutenant and captain of Co. A, and is now in Germany with the Third Army. I have a letter from the colonel of his regiment saying that his company is the best disciplined in the regiment.

Mr. Barnwell also states that Barnwell and a detachment from his regiment were given a citation for efficient service on a raid in March last, in which they penetrated to the third line of the enemy's intrenchments.

1916

LIEUT. (j. g.) JAMES M. EVANS, U. S. N. R. F., Secretary
573 East 28th Street, Paterson, N. J.

ENSIGN RUSSELL H. WHITE, U. S. N. R. F., Alumni Council Representative
Commonwealth Avenue, Boston, Mass.

DONALD B. WEBSTER, Assistant Secretary
18 Clarendon Street, Malden, Mass.

On March 1 the alumni had their annual banquet in Walker Memorial, and through the efforts of some twenty-six sixteeners the class had a good representation. Those who were present were: D. L. Comiskey, Ensign R. H. White, P. C. Webber, Ensign L. R. Byrne, H. A. Moxor, Lieut. H. C. Fuller, H. G. Morse, C. P. O. A. C. Giles, M. M., Alexander Bresth, Gorden M. Fair, Lieut. (j. g.) James M. Evans, Capt. Frank B. Hastie, Stewart Keith, S. R. Berkowitz, Earl A. Edwards, P. N. Brooks, W. H. Blank, T. S. Curtis, Walter S. Aiken, Mark Aronson, H. E. Proctor, John G. Fairfield, F. S. Hunt, O. C. Morris, Jack McDevitt, Lieut. Walter V. Reed.

A short class meeting was held and all were notified of the class letter that is about to be mailed. It was urged by the secretaries to have those present spread the news regarding this letter, so that the hearty co-operation of all the men can be expected.

At the banquet Rusty White acted as chief, and he started off the evening with a regular " M. I. T." plus three 1916's on the end. During the evening the following telegram was received from Lieut. "Irv." MacDaniels who is on duty as a naval constructor at the Navy Yard, Mare Island, Cal:

With my deepest regret that I cannot be present I wish '16 to join me in a silent toast to our members who paid the supreme sacrifice and joined the class eternal: Ignats Ingraham, Ted Wyman, Jimmy Uhlinger, Bill Sprague, Phil Morrison. Technically yours, IRVING B. MACDANIEL, Lieut. C. C., U. S. N.

Leonard Stone's father wrote the following letter in answer to the class notice regarding the banquet:

With the object of correcting your records, please note that my son, Leonard Stone, '16, has received his captain's commission in the Marine Corps. He would doubtless attend the Alumni Association Banquet if he were in this vicinity but his company is now stationed at Grieves, France.

After the banquet some of the boys adjourned to the Lenox and old " Highball " John helped us to round out an evening voted by all a great success.

This account of the deeds of Bill Sprague was published in the " Tech," from H. T. Mayo, Admiral, U. S. N., Commander-in-Chief, Atlantic Fleet:

I happened to be at the United States Aviation Station in Ille Tudy, France, on the day when the unfortunate accident occurred which cost you a dear son and the United States an accomplished aviator officer. I had had the pleasure of meeting Ensign Sprague only a couple of hours prior to the accident. It is hard to express one's feelings of sympathy in a case like this! Words seem very feeble! But I do assure you that you have the full sympathy of the United States navy in your loss. It should be a consolation to you that your son gave his life for his country—that he was doing his duty, doing all that a man could—and that he was at all times ready for that supreme sacrifice which came to him.

The navy, and the country, are proud of him and of the American manhood which he represented.

(TRANSLATED FROM THE FRENCH)

3e Arrondissement M-Me, Port De Lorient, Lorient, 29 October, 1918.

Le-Vice Admiral Commanding-in-Chief cites to the order of the day (War Cross with gilt star)

Ensign Sprague, U. S. N., on the 26th of October, attacked and probably destroyed an enemy submarine which had been sighted by him near an important convoy which he thus efficiently protected.

Killed gloriously when coming back from this brilliant action, in a landing accident.

Commanding-in-Chief, Maritime Prefect, The VICE-ADMIRAL AUBRY.
P. C. C. Le Capittaine de Corvette Vaschalde, C. P. A. L.

The death of E. A. Ingham was reported as follows in the Boston " Transcript," January 4, 1919:

Edward A. Ingham, district health officer of the California Board of Health, a graduate of the Massachusetts Institute of Technology, '16, and a former member of the Massachusetts Institute of Technology faculty, has died in California. His death was from influenza, contracted while combating the epidemic in California. He was a native of Topeka, Kan. As a member of the Technology faculty, he was first assistant in the department of biology and assistant in the sanitary research laboratory, and later, until 1917, instructor in these departments. He conducted for Technology an investigation of rural health conditions in Massachusetts, and managed the first public school for health officers established by the Public Health Committee of the Massachusetts Medical Society.

Lieut. Harold H. Burkhardt reports the following, in a letter to Mr. Gibbs, dated January 22, 1918:

> Please pardon the long delay in answering your very kind letter of August 31, enclosing the addresses of Dave Card and Bill Short. I have been very neglectful of my correspondence for quite some time, but it has not altogether been my fault.
>
> You, of course, know how swiftly events have been marching in the A. E. F. recently, and up to the cessation of hostilities. Well, my career has been almost as swift . . . and infinitely more varied. Since I last saw you at Paris I have had a multitude of changing experiences. Not all of them were pleasant by any means, but I am mighty glad to have had them.
>
> When I came back from the French army (and by the way I was with them at the time the Boches made their last attack on July 15) to rejoin my regiment, I found my regiment on the way to their sector in the Vosges. All but two batteries had already left. While we were there we took Frappelle in a little operation which the newspapers (with their usual foolishness) hailed with acclaim. It really amounted to nothing. I happened to be liaison officer with the Infantry. I saw all there was to see.
>
> From there we went to the St. Mihiel sector for the operation there in which we were so successful. The hike up there took seventeen days and I shall never forget it. It was a case of hike all night and work all day, and when you could get any sleep you slept in beautiful, soft, wet mud. Not at all pleasant. Our horses died on the way—it was awful. But we got there, and as soon as we arrived there I was chosen the liaison officer with the attacking battalion of Infantry. I was glad at the time but I didn't know what I had in store for me. I had some experience. For four days I was with the Infantry, two days and nights I lived in shell holes, under almost continual shell and machine gun fire. The first food I received in a day and a half was bread and cheese I took from German prisoners. I certainly saw what war really is.
>
> Shortly after I had returned to my regiment again I received orders to report to the chief of artillery of the Fourth Corps. I was put in charge of the artillery information advance center at Mamay. I had a fine job there, the most interesting work one could wish for. I had a telephone central and was connected up with all the sound and flash ranging stations, balloons, etc. As soon as the Boche battery was located it was my job to telephone it to the artillery concerned and get some fire put on it. Can you imagine how interesting it was? And then, a short while after I was taken here in the S. O. S. for a staff job when General Lassiter was made the chief of artillery of this army. The work was highly interesting in spite of its being so far from the lines. The best of it is that I have had the opportunity to see the war from so many different angles. It has been great. But I am sincerely grateful that it is now over. I have seen too many good men go west. It is too bad.
>
> I see that I have written a whole volume. I did not mean to write but a short note when I started out. I must close now, however.
>
> I thank you for your kindnesses when I was with you in Paris, and for the address you sent me. Owing to the unsettled condition of the army I don't think I had better write to Bill Short as he is probably no longer in Paris. By the way, from all accounts you must have had quite a celebration in Paris when the armistice was signed. How about it?
>
> I hope I may get the opportunity to drop in on you some time again, till then "au revoir"— best wishes and regards to all.

"Buzz" Bagby has surely set up a record and we will let you read an interesting account of his exploits and see if you agree with us.

Ralph Bridges Bagby, '16, who was a lieutenant in the Field Artillery, was awarded the Croix de Guerre for action in September, 1918. The translation of the citation reads as follows:

> Lieutenant Bagby (Observer of the 88th United States Aero Squadron), an observer noted for his coolness and devotion to duty, on the end of September, 1918, charged with accomplishing an artillery adjustment far behind the lines brought down an enemy machine in the course of a combat against eight German pursuit aeroplanes.

The Distinguished Service Cross was later awarded to him for work done on November 2.

The following is a record in orders, by K. P. Littauer, Chief of Air Service in the Third Corps, of the tribute to the courage and devotion of Lieutenant Bagby and his fellow officers:

> On the morning of the attack of November 1, Lieutenant Griest, pilot, and Lieutenant Burger, observer, successfully executed, under extremely difficult conditions, an infantry contact patrol for the 90th Division. Although held under heavy machine gun fire, beyond our front lines and in full view of the enemy, they did faithfully and well the work assigned to them.
>
> On the morning of November 2, Lieutenant Bernheimer, pilot, and Lieutenant Bagby, observer, on their own initiative, after having first accomplished a full reconnaissance mission of the corps sector and reported the results thereof, flew entirely alone to a depth of fifteen kilometers behind the enemy lines under extremely difficult weather conditions, passing through fog and rain, and reconnoitered the town of Stenay, enemy troop movements on the roads in the area covered and the passages of the Meuse to a point north of this town. This mission, accomplished by flying at a very low altitude, is considered entirely unique. These officers even went so far as to harass with machine gun fire an enemy airdrome behind Stenay in broad daylight.
>
> The courageous and intelligent example set by the above-mentioned four officers of the Third Corps Observation Group is highly commendable, the more so as the missions mentioned were executed in a time of great need and with an intelligent view to the amelioration of the military situation.

Dick Hunneman was wounded in Argonne Forest on October 11, 1918, and the Boston "Transcript" made this report:

> Lieut. John H. Hunneman of Wellesley Hills, named in today's list of wounded, was struck down by a machine gun bullet in the Argonne Forest on October 11, but is now convalescent. At the time, he was in command of Company E, Thirtieth United States Infantry. He is twenty-six years old, was born in Roxbury, but has been a resident of Wellesley for twenty years. His parents are Mr. and Mrs. John A. Hunneman of Abbott Road. The son was graduated from Harvard in 1914 and in 1916 received the degree of mechanical engineer at the Massachusetts Institute of Technology. He went to Plattsburg in 1917, was commissioned a second lieutenant, and soon after was given a first lieutenancy.

One noontime, on the way back to my duties, I ran into Don MacRae and had to look twice to believe my eyes. He is a lieutenant-colonel on the General Staff and wears three gold service stripes and one gold wound stripe. He was awarded the Military Cross of England while serving with a Canadian regiment. Don enlisted as a private in an American battalion of the Canadian army in January, 1916. He was made an officer after one month's training and when his regiment sailed for France he was a major. He was later made a major in the British army and when this country entered the war he was transferred to the American army and made a major of Infantry. He toured this country, giving lectures on the type of warfare carried on by the Huns. When he reached France he was detailed to the General Staff School and there he was made a lieutenant-colonel. Don came to Tech after spending two years at West Point. He has the same rank as his classmates at the "Point" with the exception of a few engineer officers. At present he is stationed in Washington on the General Staff as a liaison officer. Some record.

Lieutenant Warshaw saw some real fighting as described in the account of the Boston "Herald":

> Lieut. Nathaniel Warshaw, son of Lewis Warshaw of 11 Bedford Street, Quincy, has reached home after thrilling experiences in France since the outbreak of the war. He reached the United States last Wednesday and was sent to Camp Mills, N. Y., from which he was discharged on Friday, when he started for home.

He was commanding officer of Battery B, 55th Coast Artillery, and saw service in some of the severest fighting of the war. He fought at Beaufort, the second battle of the Marne, in the Argonne, at Vesle and the Aisne, and was in the Meuse sector from September 26 last up to the signing of the armistice on November 11.

He is twenty-four years old, a graduate of the Quincy High School in 1910, and received his B.S. from the Massachusetts Institute of Technology in 1916. He enlisted on April 29, 1917, was commissioned two months later at the officers' training school at Fortress Monroe, and left with his regiment for France on March 25, 1918. He has a brother, Allan, who is still in France as a member of a motor corps unit, and a sister, Rebecca, who is chief yeowoman at the Portsmouth Navy Yard.

Mr. and Mrs. P. J. Moriarty of O'Connor Avenue announce the engagement of their youngest daughter, Helen C. to Philip O'Keefe of Lynn. Miss Moriarty was graduated from the high school and from the Larson Sloyd School of Boston. She was connected with the Manual Arts Department of the Worcester schools and acted as supervisor of handwork on the Holyoke playgrounds summers. O'Keefe is the son of the late Attorney John O'Keefe of Lynn and Boston, who was chairman of the State Fire Prevention Board. He is a Phi Beta Kappa man of Harvard, 1912, and of the Massachusetts Institute of Technology and is an electrical engineer. He has just returned from a year in Porto Rico in the interests of Stone & Webster of Boston. The wedding will take place in the early summer.

Mrs. Thomas C. Shreve of Digby, N. S., announces the marriage of her daughter, Violet, to Mr. Henry Gardner Morse of Boston. The wedding ceremony was performed by the Rev. F. D. Budlong at St. Mark's Church, Dorchester, at four o'clock on Tuesday, December 31. Several months ago he returned from Calcutta, India, to enlist in the naval air service.

Lieut. " Cy " Guething is the proud father of a nine-pound son. Cy has named his son after his late brother, Theodore Hervey Guething, of the class of 1914. Cy says young " Spig " has all the ear-marks of a good athlete.

1917

WALTER L. MEDDING, Secretary, 601st Regt., Beaune, France.

ARTHUR E. KEATING, Assistant Secretary, 893 Seaview Avenue, Bridgeport, Conn.

No report received from the secretary.

John J. Finn was reported by the postmaster as dead. The REVIEW office has no further information, or details as to the cause or time of death.

A cable recently received from France tells of the identification of the grave of Lieut. John Cowperthwaite Tyler of the aviation service, who has been reported as missing in action since September 18, 1918. Lieutenant Tyler was the eldest son of May Cowperthwaite and the late Walter Lincoln Tyler of 80 Pierrepont Street, Brooklyn, and a brother of Walter Arnold Tyler, recently an ensign in the Aerography Division of Naval Aviation, David Budlong Tyler, Mrs. Winthrop Searles Tuttle and Miss Constance Tyler. Lieutenant Tyler was graduated from the Polytechnic Preparatory School in 1911 and from Williams College in 1915, where he was a member of the Psi Upsilon fraternity. He received the degree of Bachelor of Science in the department of Mechanical Engineering at the Massachusetts Institute of Technology in June, 1917, carrying with it a degree from Harvard University. Lieutenant Tyler entered the Ground School of Military Aeronautics at the Massachusetts Institute of Technology in June, 1917, and was one of ten honor students of his class to be sent to France in August for his flying training.

He received his brevet or pilot's license in December and was given his commission as first lieutenant on January 11, 1918. After subsequent training as bombing pilot he was sent to the front in July as a member of the French Escadrille Br. 129, and went through two offensives with them, receiving a citation for the Croix de Guerre on July 16—his first day over the enemy lines. About September 1 he was transferred to the American Army as a flight commander in the 11th Aero Squadron, a friend of his writing that he was one of the first three to be picked as deserving a command, and one squadron head officially reported him as the best American bombing pilot on the western front. The following is an extract from a letter written to Lieutenant Tyler's mother by one of his comrades, under date of December 1, 1918:

> It was at the time of the St. Mihiel attack and German aviation was at the height of its last desperate effort to stop American bombardment. John's squadron had been working incessantly, in spite of furious attacks by overwhelming numbers of German planes—twenty or thirty machines in one formation. John was in a formation of six planes coming back from bombing a railroad center (Conflans), when they were attacked by a swarm of sixteen enemy planes. The leaders were shot down, and among them John and his observer.

A memorial service for Lieutenant Tyler was held at the Church of the Pilgrims, corner of Remsen and Henry Streets, on Sunday, March 2, at five o'clock.

The class secretary's mother has written the Editor the following:

> Captain Medding has just completed a 2500-mile tour by automobile over all the devastated territory at the front, examining all bridges of the Allies and Germans, and rendering reports on the same—having been in conference with the chief engineers of British and Belgian armies.

His address is given at the head of these notes.

1918

David M. MacFarland, Secretary, 626 South High Street, West Chester, Pa.

No report received from the secretary.

The engagement is announced of Miss Helen Carol Horswell to Capt. Gardiner Endicott Johnson. Captain Johnson is at present personnel adjutant of the Casual Officers' Camp, Anger, France.

The "Record," Troy, N. Y., of February 18 has the following:

> Joseph Herzstein was yesterday afternoon appointed executive secretary of the Rensselaer County Tuberculosis Association at a meeting of the executive committee of the association at the Union Club. He will assume his duties March 1.
>
> The members of the executive committee feel gratified in being able to secure the services of as competent a young man as they believe Mr. Herzstein to be. Although he is only twenty-five years old, the committee thinks his past record sufficient evidence of the work he may be expected to do in his new capacity. Mr. Herzstein is a college man with several academic degrees.
>
> He obtained the degree of Bachelor of Science at the New York college, where he took a special course in biology and sanitation. The degree of Master of Science was bestowed upon him by the Massachusetts Institute of Technology. Mr. Herzstein has also taken courses in housing, sanitary engineering, public health, industrial hygiene, control of a city's milk supply, vital statistics and a number of other subjects. He recently completed a course in the study of tuberculosis.
>
> Mr. Herzstein, whose home is in New York, comes to this city highly recommended. Among recommendations received are from C. E. A. Winslow of Yale University, D. B. Armstrong of the committee of health and tuberculosis demon-

stration of the National Tuberculosis Association, Fred S. Lee of the College of Physicians and Surgeons, Columbia University, and Prof. W. T. Sedgwick of the Massachusetts Institute of Technology.

For four years Mr. Herzstein acted as secretary of the New York State Committee on Ventilation. During the past six months he saw service in the medical department of the United States army in an engineering training camp of 30,000 men. He ranked as a non-commissioned officer in the office of the camp surgeon.

Julian Plaisted Nutter was accidentally killed while handling a shotgun on October 23, 1917.

From Professor Locke has come the following biographical notice of Masayuki Tatsumo, of Iyo, Japan:

> Born 1886, Tokyo, Japan, attended College of Engineers, Tokyo Imperial University. 1917-1918 special student at Tech. 1910-1916 metallurgical engineer, Shesakajima Copper Works, Sumitomo Besshi Mine. 1916-1917 travelling in the United States and Canada, visiting mines and smelters. Present position, metallurgical engineer, Sumitomo Besshi Mine, Iyo, Japan.

1919

E. R. Smoley, Secretary, Horse Head Inn, Palmerton, Pa.

With a representation of over fifty, our class sat with the rest of the classes at the alumni banquet, March 1. The following life officers were elected at the meeting before the dinner: D. D. Way, president; E. F. Doten, vice-president; E. R. Smoley, secretary and treasurer.

Now that we are all drifting out to different parts of the globe, let us try nevertheless to keep in touch with each other. This column is here for this purpose and there is no reason why we cannot keep it full of live news. Send in a line and let us know about yourself or any one else you hear of.

Several of the class have written and Mr. G. C. McCarten turned several letters over to me.

Jimmy Reis writes from the Young Men's Christian Association, Gary, Ind., where he is working for the Illinois Steel Company:

> At present, I am being broken as a " floater " in No. 4 open hearth. This means that I am learning to take the place of any of the wops who happen to get drunk and fail to show up for work in the morning. So far I have been broken in as delay clerk, whose job is to check up all the charges that go into the furnaces, and to see that all of this is put into it. At present, I am on the mixer. Here we get all the hot metal from the blast furnaces and hold it until the different open hearth need it. Next I go down to the gas house and from there into the cinder pits.

Good luck to you, Jim.

I had a letter from Paul Peltier and he says that " It is the life." You know he is on his way to Turkey. The letter that I received was written on board ship en route for Brest.

Oscar Mayer writes from Cananea, Sonora, Mexico, where he is with the Cananea Consolidated Copper Company, S. A.:

> We're a big copper mine, and we're near, but on the wrong side of the Mexican border. We're on the Continental Divide, we're way up in the air, and we're very cold. We're in a mountain range and on the border of a broad desert, and when we're not choking with sulphur gas, we're gazing over a hundred miles of yellow sand, to where lies Arizona. God bless her!
>
> This is the safest part of Mexico to be in. You see there are no trees for bandits

to hide behind, and with ordinary luck, you could see a troop approaching sixty miles away. Not long ago, they held up the customs officers on the border, shot five of them, and got away with eighty thousand dollars.

I should not be surprised if the plant will soon be shut down entirely, as it was last year when the peons began to make demands on the company. If that comes, I am going to spend a few months kicking around in the interior.

From R. B. McMullen:

I have but a few days ago returned from France, having taken an active part throughout the summer and fall with the First Gas Regiment, Chemical Warfare Service. The regiment, though small, was the only combatant gas troop in the United States Army, so we saw a good deal of tough fighting all the way from Flanders to the Vosges. I expect to be discharged here at the Chemical Warfare camp, tout de suite, and then to resume work in Course X at Tech. I found your letter waiting for me and beg to be admitted to the 1919 Alumni Association for the present, at least, as I would most certainly enjoy the banquet at the Walker Memorial on March 1.

Sure enough, Mac was there.

Upon Harold Edward Langley was bestowed the honor of pressing the button which sent the "Kisnop," the first steel ship to be built and launched in New Hampshire, to the water.

Richard S. Everit received his commission as second lieutenant at the Officers' Training School at Fort Monroe.

George A. Beeche has received his discharge from the Tank Corps and has returned to Technology.

Donald D. Way is with the Singer Manufacturing Company, Elizabethport, N. J., after having received his discharge from the Signal Corps.

George Wells Root died in the service on December 25, 1918, at an American base hospital in England. Root was twenty-two years of age last November. He left Technology during his sophomore year, went to France with the Technology Ambulance Unit, being transferred to the Camion Munition Service connected with the French army. Here he served six months and then returned to the United States, and enlisted in the spring of 1918 in Company A, 303d Batt., Heavy Tank Corps, stationed at Camp Colt, Gettysburg, Pa. He departed from this camp during the summer and arrived in England in August, 1918. Soon after landing he was stricken with influenza and then pneumonia.

Henri DeBonneval has been in the French army since a year ago last June. His address is 5 C. M., 234th Regt. of Inf., Section 136, France.

Robert F. Lewis is out of the service and has returned to Technology.

Working for the New Jersey Zinc Company in Palmerton, Pa., with me are George C. McCarten, Edmund J. Flynn, and Royden L. Burbank. Mac has just returned here after receiving a commission in Engineers.

Albert B. Reynolds' address is 225 Union Street, Schenectady, N. Y.—Herbert Barrett has been commissioned a second lieutenant with the 9th Inf. in France.—Arthur C. Kenison is with the Underwriters' Laboratories, 87 Milk Street, Boston, Mass.—Charles J. Farist is in the Chelsea Naval Hospital laid up with pneumonia.—John M. Erving is in the Army of Occupation, Germany.—Charles B. Maloy is still in France with the 26th Division.—Lansing M. Quick has received his honorable discharge from Naval Aviation and has returned to Tech.

Lieut. Harry M. Atkinson, Jr., son of Col. Harry M. Atkinson, died on November 2 of pneumonia in a hospital at Angers. He had been taking his last training at an artillery school in the French town, preparing to go to the front. Lieutenant Atkinson was graduated from Harvard and had supplemented his work there with two years' training at the Massachusetts Institute of Technology. He won his commission at Plattsburg and was assigned as instructor to several American camps, before going abroad.

Norwood P. Johnston is now out of the service, and back at his home. He is planning to resume his studies at Tech.

E. R. Smith has received his discharge from the army, and has resumed his work at Tech.— B. Darling is with the Vulcan Fibre Company, Boston, in the sales department.—C. C. Stewart, R. S. Bolan and A. G. Richards are working for the National Aniline Company at Wilmington, Delaware.—A. F. O'Donnell, D. K. Webster and B. H. Sherman are with the DuPont Powder Company in Delaware. —W. T. Hall, T. Shedlovsky, A. W. Contieri, C. L. Nutting, L. B. Smith are at Tech, taking advanced work.—G. G. Fleming has returned to Tech, after his discharge from the Motor Transport Corps.—W. S. Frazier and F. E. Britton are in the cast of this year's Tech show.

Don't forget to send in some live news, '19 men.

American University Union

IN EUROPE

PARIS HEADQUARTERS
8, Rue de Richelieu
(Royal Palace Hotel, facing Theatre Francais)

Telephone: Central 05-03
Cable Address: "Royapal, Paris"

THE AMERICAN UNIVERSITY UNION was founded by about thirty American colleges to aid all American college men in any form of service abroad. West Point and Annapolis are honorary members of the Union. Many more colleges will doubtless join.

LOCATION—The Union has obtained for its headquarters the exclusive use of a first-class hotel and offers the privileges of a residential club in the very center of Paris, close to the Palais-Royal station of the subway, from which all parts of the city can be reached quickly and cheaply.

COLLEGE REGISTRATION—All college men who come to Paris are urged to register at the Union. Harvard, Massachusetts Institute of Technology, Michigan, Princeton and Yale have already established bureaus at the Union in charge of special representatives. The interests of other colleges will be served by the general staff.

All American college men are urged to register by mail their name, college, class, degree (if any), European address, and name and address of nearest relative at home. Send to *Executive Committee, American University Union in Europe, 8, Rue de Richelieu, Paris.*

TECHNOLOGY BUREAU—Since the signing of the armistice there is even greater demand for the Union and the Technology Bureau in Paris. The registration was large during the war but it has increased since then many fold.

THE M. I. T. COMMITTEE FOR NATIONAL SERVICE endorses this activity and plans to maintain the Technology Bureau during this calendar year. The Committee urges Technology Alumni, on this account, to contribute to the Fund for National Service by which the Bureau is maintained. All remittances sent to the Alumni Association, M. I. T., Cambridge, Mass., will receive prompt acknowledgment.

Vol. XXI JULY, 1919. No. 3

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHVSETTS INSTITVTE OF TECHNOLOGY

PVBLISHED BY
THE ALVMNI ASSOCIATION

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THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Cambridge, Mass.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY aims to give thorough instruction in *Civil, Mechanical, Chemical, Mining, Electrical and Sanitary Engineering; in Chemistry, Electrochemistry, Architecture, Physics, Biology and Public Health, Geology and Naval Architecture.*

To be admitted to the Institute, the applicant must have attained the age of seventeen years and must pass examinations in algebra, plane and solid geometry, physics, history of the United States (or ancient history), English, French and German. Preparation in some one of a series of elective subjects is also required. A division of these examinations between different examination periods is allowed. In general, a faithful student who has passed creditably through a good high school, having had two years' study of French and German, should be able to pass the Institute examinations.

Graduates of colleges, and in general all applicants presenting certificates representing work done at other colleges, are excused from the usual entrance examinations and from any subjects already satisfactorily completed. Records of the College Entrance Examination Board, which holds examinations at many points throughout the country and in Europe, are also accepted for admission to the Institute.

Instruction is given by means of lectures and recitations, in connection with appropriate work in the laboratory, drawing room or field. To this end extensive laboratories of chemistry, physics, biology, mining, mechanical engineering, applied mechanics, and the mechanic arts, have been thoroughly equipped, and unusual opportunities for field-work and for the examination of existing structures and industries have been secured. So far as is practicable, instruction is given personally to small sections rather than by lectures to large bodies of students.

The regular courses are of four years' duration, and lead to the degree of Bachelor of Science. In most courses the work may also be distributed over five years by students who prefer to do so. Special students are admitted to work for which they are qualified; and the degrees of Master of Science, Doctor of Philosophy, and Doctor of Engineering are given for resident study subsequent to graduation. Opportunity for research is offered in all the departmental laboratories, in the three recently established Research Laboratories of Applied Chemistry and Physical Chemistry, and in the Sanitary Research Laboratory and Sewage Experiment Station.

The tuition fee, not including breakage in the laboratories, is $250 a year. In addition, $30 to $45 per year is required for books and drawing materials.

For catalogues and information, address

ALLYNE L. MERRILL, *Secretary of the Faculty,*

MASSACHUSETTS INSTITUTE OF TECHNOLOGY,

CAMBRIDGE, MASS.

ALUMNI ASSOCIATION

OF THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

OFFICERS

President, Coleman du Pont, '84 (term expires May, 1920)

Vice-Presidents,
- Van Rensselaer Lansingh, '98 (term expires May, 1920)
- George L. Gilmore, '90 (term expires May, 1921)
- Hollis Godfrey, '98 (President Technology Clubs Associated)

Secretary-Treasurer, Walter Humphreys, '97 (term expires May, 1920)

Executive Committee

The President, Vice-Presidents and Secretary-Treasurer
Orville B. Denison, '11 (term expires May, 1920)
Charles R. Main, '09 (term expires May, 1920)
Carl Gram, '09, (term expires May, 1921)
Kenneth Moller, '07 (term expires May, 1921)

TERM MEMBERS OF THE CORPORATION

Term expires June, 1920.

James W. Rollins, '78
Jasper Whiting, '89
William H. King, '94

Term expires June, 1921.

Samuel J. Mixter, '75
Henry J. Horn, '88
Harry J. Carlson, '92

Term expires June, 1922.

E. W. Rollins, '71
Willis R. Whitney, '90
Elisha Lee, '92

Term expires June, 1923

Eben S. Stevens, '68
Arthur D. Little, '85
Paul W. Litchfield, '96

Term expires June, 1924.

Henry A. Morss, '93
J. Franklin McElwain, '97
Merton L. Emerson, '04.

STANDING COMMITTEES

Assemblies

Lawrence Allen, '07, until 1920.
Harold E. Kebbon, '12, until 1921.
Ambrose Walker, '91, until 1922.
Orville B. Denison, '11, until 1923.
Capt. William R. Mattson, '13, until 1924.

Nominations

Term expires May, 1920	Term expires May, 1921	Term expires May, 1922
A. F. Bemis, '93.	Francis R. Hart, '89.	Frank L. Locke, '86.
George B. Glidden, '93.	Joseph H. Knight, '96.	Henry A. Morss, '93.
Merton L. Emerson, '04.	G. D'W. Marcy, '05.	Orville B. Denison, '11.

Permanent Funds

Francis R. Hart, '89, until May, 1920.
Frank A. Merrill, '87, until May, 1921.
Robert H. Richards, '68, until May, 1922.
Walter Humphreys, '97, *Treasurer.*

"The Technology Review"

Warren K. Lewis, '05, until 1920.
M. B. Dalton, '15, until 1921.
H. S. Wonson, '07, until 1922.
Wilfred Bancroft, '97, until 1923
Arthur T. Hopkins, '97, until 1924.

SPECIAL COMMITTEES

Alumni Fund

Everett Morss, '85, *Chairman*
James W. Rollins, '78.
Arthur T. Bradlee, '88.
Edwin S. Webster, '88.
Frederic H. Fay, '93.

Runkle Memorial

Robert H. Richards, '68.
C. Frank Allen, '72.
Harry W. Tyler, '84.

Revision of Constitution and By-Laws

James P. Munroe, '82, *Chairman.*
Everett Morss, '85.
Frederic H. Fay, '93.

Historical Collection

Paul C. Leonard, '17, until 1920.
T. D'A. Brophy, '16, until 1921.
S. K. Humphrey, '98, until 1922.
James P. Munroe, '82, until 1923, *Chairman.*
Dean Alfred E. Burton, until 1924.

ADVISORY COUNCILS FOR UNDERGRADUATE ACTIVITIES

Members of the advisory councils are elected at the April meeting of the Council.

Athletics

Allan W. Rowe, '01, until 1920.
(Eligible for re-election.)
H. E. Worcester, '97, until 1920.
Carl W. Gram, '09, until 1921.
Dr. J. Arnold Rockwell, '96, until 1922.
Frederick H. Hunter, '02, until 1922.

Budget and Finance Committees

H. E. Worcester, '97, until 1920.
Merton L. Emerson, '04, until 1921.
Bursar H. S. Ford, until 1922.

Undergraduate Publications

Grosvenor D'W. Marcy, '05, until 1920.
R. B. Pendergast, '02, until 1921.
A. T. Robinson, until 1922.
Paul C. Leonard, '17, until 1923.
Alden H. Waitt, '14, until 1924.

"Tech Show"

James I. Finnie, '09, until 1920.
George B. Glidden, '93, until 1921.
Alexander Macomber, '07, until 1922.

Musical Clubs

George E. Russell, '00, until 1920.
Allen Abrams, '15, until 1921.
Dudley Clapp, '10, until 1922.

THE M. I. T. COMMITTEE FOR NATIONAL SERVICE

James W. Rollins, '78, *Chairman.*

I. W. Litchfield, '85,
F. A. Smythe, '89,
Charles W. Eaton, '85,
Vice-Chairmen.

A. F. Bemis, '93.
M. L. Emerson, '04.
F. H. Fay, '93.
L. D. Gardner, '98.
Morris Knowles, '91.
R. B. Price, '94.
D. G. Robbins, '07.
H. W. Tyler, '84, *Secretary.*

Executive Committee

James W. Rollins, '78.
Harry W. Tyler, '84.
Charles W. Eaton, '85.

Finance Committee

H. W. Tyler, '84, *Chairman.*
A. F. Bemis, '93.
George L. Gilmore, '90.
Walter Humphreys, '97, *Treasurer.*

By vote of the Alumni Council, February 16, 1914, the president and secretary-treasurer are members *ex-officio* of all committees, without vote.

COUNCIL OF THE ALUMNI ASSOCIATION

Officers of the Association:

President, Coleman du Pont, '84.
Vice-Presidents { Van Rensselaer Lansingh, '98.
George L. Gilmore, '90.
President Tech Clubs Associated, Hollis Godfrey, '98.
Secretary-Treasurer, Walter Humphreys, '97.
Executive Committee { Charles R. Main, '09. Kenneth Moller, '07.
Orville B. Denison, '11. Carl Gram, '09.

Five latest living ex-Presidents:

Jasper Whiting, '89.
Henry J. Horn, '88.
Henry A. Morss, '93.
Charles A. Stone, '88.
Francis R. Hart, '89.

Honorary member: I. W. Litchfield, '85.

Representatives at large:

Until the annual meeting, 1920.
Wilfred Bancroft, '97.
Frank Cheney, Jr., '82.
Raymond W. Ferris,'08.
Stanley G. H. Fitch, '00.
B. F. W. Russell, '98.

Until the annual meeting, 1921.
Charles W. Aiken, '91.
Bradley Dewey, '09.
George C. Gibbs, '00.
Russell Robb, '88.
James Swan, '91.

Class representatives:

'68, Robert H. Richards.
'69, Howard A. Carson.
'70, Charles R. Cross.
'71, E. W. Rollins.
'72, C. Frank Allen.
'73, Samuel E. Tinkham.
'74, George H. Barrus.
'75, Thomas Hibbard.
'76, C. T. Main.
'77, B. T. Williston.
'78, E. P. Collier.
'79, Charles S. Gooding.
'80, George H. Barton.
'81, John Duff.
'82, James P. Munroe.
'83, Horace B. Gale.
'84, Harry W. Tyler.
'85, Arthur D. Little.
'86, A. A. Noyes.
'87, Henry F. Bryant.
'88, John C. Runkle.
'89, Henry Howard.
'90, William Z. Ripley.
'91, Arthur H. Alley.
92, Leonard Metcalf.
93, George B. Glidden.
'94, S. C. Prescott.
'95, H. K. Barrows.
'96, J. Arnold Rockwell.
'97, C. W. Bradlee.
'98, Seth K. Humphrey.
'99, H. J. Skinner.
'00, Ingersoll Bowditch.
'01, Robert L. Williams.
'02, F. H. Hunter.
'03, T. E. Sears.
'04, M. L. Emerson.
'05, G. D'W. Marcy.
'06, Edward B. Rowe.
'07, Lawrence Allen.
'08, H. T. Gerrish.
'09, Carl W. Gram.
'10, Charles E. Green.
'11, Herbert Fryer.
'12, Harold E. Kebbon.
'13, W. R. Mattson.
'14, Charles Parker Fiske.
'15, Marshall B. Dalton.
'16, Russell H. White.
'17, Paul C. Leonard.
'18, Kenneth Reid.
'19, G. H. Wiswall, Jr.

Local Societies with representation on the Council:

Akron—Technology Club of Akron, Ohio,	W. K. Lewis, '05.
Albany—Technology Club of Eastern New York,	Myron M. Davis, '08.
Birmingham—Southeastern Technology Association,	H. S. Wonson, '07.
Buffalo—Technology Club of Buffalo,	Arthur C. Anthony, '86.
Butte—Technology Club of Montana,	George A. Packard, '90.
Charleston—Technology Club of West Virginia,	Arthur E. Fowle, '93.
Chicago—Technology Club of Chicago,	B. R. T. Collins, '88.
Cincinnati—Technology Club of Cincinnati,	H. N. Dawes, '93.
Cleveland—Technology Club of Northern Ohio,	C. W. Eaton, '85.
Connecticut Valley Technology Club,	Eben S. Stevens, '68.
Dayton Technology Association,	Charles F. Park, '92.
Denver—Rocky Mountain Technology Club,	Allen H. Rogers, '90.
Detroit Technology Association,	Everett Morss, '85.
Hartford—Technology Club of Hartford,	G. H. Gleason, '03.
Hawaii—Technology Club of Hawaii,	Edwin S. Webster, '88.
Japan—Technology Association of Japan,	H. W. Stevens, '04.
Kansas—Southwestern Association of M. I. T.,	W. L. Underwood, '98.
Lowell—Technology Club of Merrimack Valley,	R. A. Hale, '77.
Los Angeles—Technology Club of Southern California,	J. C. Chase, '74.
Manchester—Technology Club of New Hampshire,	Walter D. Davol, '06.
Milwaukee—Technology Club of Milwaukee,	George C. Wales, '89.
Minneapolis—Technology Club of Minnesota,	A. W. Rowe, '01.
Montreal—Technology Club of Lower Canada,	George W. Vaillant, '92.
New Bedford—Technology Club of New Bedford,	C. F. Lawton, '77.
New Haven County Technology Club,	Arthur T. Hopkins, '97.
New York—Technology Club of New York,	R. H. Howes, '03.
Philadelphia—Technology Club of Philadelphia,	Elisha Lee, '92.
Pittsfield—Berkshire County Alumni Association,	W. B. Snow, '82.
Portland—Technology Association of Oregon,	A. D. Maclachlan, '96.
Providence—Technology Club of Rhode Island,	Frank L. Pierce, '89.
St. Louis Society of the M. I. T.,	C. M. Spofford, '93.
Salt Lake City—Intermountain Technology Ass'n,	G. E. Russell, '00.
San Francisco—Technology Association of Northern California	Burton G. Philbrick, '02.
Seattle—Technology Club of Puget Sound,	A. G. Robbins, '86.
Spokane—Inland Empire Association of M. I. T.,	H. W. Gardner, '94.
Springfield—Technology Club of Springfield,	Frederick W. Fuller, '96.
Syracuse—M. I. T. Club of Central New York,	T. H. Skinner, '92.
Washington Society of the M. I. T.,	Henry A. Morss, '93.
Worcester—Technology Association of Worcester County,	Orville B. Denison, '11.

Other Local Societies not yet appointed a representative on the Council:

Atlanta Association M. I. T.
Boston—Technology Club of Boston.
Bridgeport—Technology Club of Bridgeport.
Chile—Technology Club of Chile.
China—Technology Club of China.
Duluth—Technology Club of Lake Superior.
Fall River—Technology Club of Fall River.
Harrisburg—Technology Club of Central Pennsylvania.
Indianapolis—Indiana Association M. I. T.
Louisville—Technology Club of Louisville, Ky.
New Orleans—Technology Club of the South.
Niagara Falls—Technology Club of Niagara Falls.
Panama—Technology Club of Panama.
Paris—Tech Bureau of the American University Union.
Peking—Technology Club of Peking.
Pittsburgh Association M. I. T.
Portland—Technology Club of Maine.
Rochester—Technology Club of Rochester.
Urbana—Tech Club of University of Illinois.

CLASS SECRETARIES

Robert Hallowell Richards . '68
32 Eliot Street, Jamaica Plain, Mass.

———— . . . . '69

Charles Robert Cross . . . '70
100 Upland Road, Brookline, Mass.

Edward Warren Rollins . . '71
Dover, N. H.

C. Frank Allen . . . . . . '72
88 Montview Street, West Roxbury, Mass.

Samuel Everett Tinkham . . '73
The Warren, Roxbury, Mass.

Charles French Read . . . '74
Old State House, Boston, Mass.

Edward A. W. Hammatt . . '75
South Orleans, Mass.

John Ripley Freeman . . . '76
815 Grosvenor Building, Providence, R. I.

Richard Augustus Hale . . '77
Essex Company, Lawrence, Mass.

E. P. Collier . . . . '78
256 Summer Street, Boston, Mass.

Frank G. Stantial . . . . '79
Care Cochrane Chemical Co., 148 State Street, Boston, Mass.

George Hunt Barton . . . '80
89 Trowbridge St., Cambridge, Mass.

Frank Elden Came . . . . '81
17 Metcalfe Apartments, Westmount, Montreal, P. Q.

Frank H. Briggs, Ass't Secretary, '81
Hotel Puritan, Boston, Mass.

Walter Bradlee Snow . . . '82
136 Federal Street, Boston, Mass.

Grenville T. Snelling, Ass't Sec. '82
114 East 28th Street, New York, N. Y.

Harvey Stuart Chase . . . '83
84 State Street, Boston, Mass.

Harry W. Tyler . . . . . . '84
M. I. T., Cambridge, Mass.

Richard H. Pierce . . . . '85
462 Walnut Street, Newtonville, Mass.

Arthur Graham Robbins . . '86
M. I. T., Cambridge, Mass.

Edward Galbraith Thomas . '87
213 Floyd Street, Toledo, Ohio.

William Gage Snow . . . . '88
95 Milk Street, Boston, Mass.

Walter H. Kilham . . . . '89
9 Park Street, Boston, Mass.

George L. Gilmore . . . . '90
Lexington, Mass.

Henry A. Fiske . . . . . . '91
Care General Fire Extinguisher Co., 275 West Exchange Street, Providence, R. I.

George H. Ingraham . . . '92
2052 Cornell Road, Cleveland, Ohio.

C. H. Chase, Ass't Secretary . . '92
Tufts College, Mass.

Frederic Harold Fay . . . '93
308 Boylston Street, Boston, Mass.

George B. Glidden, Ass't Sec. . '93
551 Tremont Street, Boston, Mass.

Samuel Cate Prescott . . . '94
M. I. T., Cambridge, Mass.

Wallace C. Brackett . . . '95
105 Washington Street, Boston, Mass.

Charles E. Locke . . . . . '96
M. I. T., Cambridge, Mass.

J. Arnold Rockwell, Ass't Sec. . '96
24 Garden Street, Cambridge, Mass.

John Arthur Collins, Jr. . . '97
67 Thorndyke Street, Lawrence, Mass.

Charles W. Bradlee, Act. Sec. . '97
54 Canal Street, Boston, Mass.

A. A. Blanchard . . . . . . '98
M. I. T., Cambridge, Mass.

W. Malcolm Corse . . . . . '99
The Ohio Brass Co., Mansfield, Ohio.

Benj. S. Hinckley, Ass't Sec. . '99
177 Park Street, Newton, Mass.

Ingersoll Bowditch . . . . '00
111 Devonshire Street, Boston, Mass.

Robert L. Williams . . . . '01
107 Waban Hill Road, Chestnut Hill, Mass.

Frederick Huston Hunter . . '02
Box 11, West Roxbury, Mass.

J. Albert Robinson, Ass't Sec. . '02
Care Research Division, Federal Board for Vocational Training, Washington, D. C.

Myron H. Clark . . . . . . '03
1790 Broadway, New York, N. Y.

R. H. Nutter, Ass't Secretary . '03
Box 274, Lynn, Mass.

Henry W. Stevens . . . . '04
39 Boylston Street, Boston, Mass.

Amasa M. Holcombe, Ass't Sec. . '04
610 Boatmen's Bank Building, St. Louis, Mo.

Grosvenor DeWitt Marcy . . '05
246 Summer Street, Boston, Mass.

Charles W. Hawkes, Ass't Sec. '05
23 Saxon Road, Newton Highlands, Mass.

C. F. W. Wetterer . . . . '06
P. O. Box 168, Tampa, Fla.

J. W. Kidder, Ass't Secretary . '06
50 Oliver Street, Boston, Mass.

Bryant Nichols . . . . . '07
10 Grand View Road, Chelsea, Mass.

Harold S. Wonson, Ass't Sec. . '07
Care W. H. McElwain, 354 Congress Street, Boston, Mass.

Rudolph B. Weiler . . . . '08
340 North Penn Street, W. Chester, Pa.

L. T. Collins, Ass't Secretary . '08
13 Congress Street, Boston, Mass.

Charles R. Main . . . . . '09
201 Devonshire Street, Boston, Mass.

George A. Haynes, Ass't Sec. . '09
530 Atlantic Avenue, Boston, Mass.

Dudley Clapp . . . . '10
Care Gorton-Pew Fisheries, Gloucester, Mass.

Orville B. Denison . . . . '11
63 Sidney Street, Cambridge A, Mass.

Herbert Fryer, Ass't Secretary . '11
Room 506, 10 State Street, Boston, Mass.

Randall Cremer . . . . . '12
7 The Circle, Rochelle Park, New Rochelle, N. Y.

F. D. Murdock . . . . . . '13
438 Huntington Avenue, Buffalo, N. Y.

Arthur W. Kenney, Ass't Sec. . '13
1214 West 10th Street, Wilmington, Del.

H. B. Richmond . . . . . . '14
12 George Street, Medford, Mass.

Elmer E. Dawson, Jr., Ass't Sec. '14
28 Washington Avenue, Winthrop, Mass.

William B. Spencer . . . . '15
527 N. Grove Street, E. Orange, N. J.

F. P. Scully, Ass't Secretary . . '15
5 Exeter Park, Cambridge, Mass.

James M. Evans . . . . . . '16
1916 16th Street, N.W., Washington, D. C.

Donald B. Webster, Ass't Sec. . '16
18 Clarendon Street, Malden, Mass.

Walter L. Medding . . . '17
601st Regt., Beaune, France

Arthur E. Keating, Ass't Sec. . '17
893 Seaview Avenue, Bridgeport, Conn.

Kenneth E. Bell, Acting Secretary,
129 Hawthorne Street, Malden, Mass.

David M. MacFarland . . . '18
626 South High Street, West Chester, Pa.

Julian C. Howe, Ass't Secretary. '18
Cohasset, Mass.

Eugene R. Smoley . . . . '19
Horsehead Inn, Palmerton, Pa.

Everett Doten, Acting Secretary,
115 Glenwood Road, Somerville, Mass.

THE TECHNOLOGY CLUBS ASSOCIATED

Organized in New York, January 17, 1913.

President, Hollis Godfrey, '98, Philadelphia, Pa.

Vice-Presidents, P. S. du Pont, '90, Wilmington, Del.; Charles G. Hyde, '96, San Francisco, Cal.; Henry M. Waite, '90, Dayton, Ohio; Edmund Hayes, '73, Buffalo, N. Y.

Secretary-Treasurer, Walter Humphreys, '97, Massachusetts Institute of Technology, Cambridge, Mass.

Assistant Secretary, Eugene S. Foljambe, '01, Philadelphia, Pa.

LOCAL ALUMNI ASSOCIATIONS

Akron—The M. I. T. Club of Akron, Ohio, W. H. Fleming ('16), Secretary, 350 Wildwood Avenue, Akron, Ohio.
☞ Luncheon— First Saturday of the month at the University Club, Akron, Ohio.

Albany—Technology Club of Eastern New York, Norman A. Lougee ('11), Secretary, General Electric Co., Consulting Engineers' Laboratory, Schenectady, N. Y.

Atlanta— Atlanta Association M. I. T., W. J. Sayward ('01), Secretary, 609 Chamber of Commerce, Atlanta, Ga.
☞ Luncheon—Fridays at 1 o'clock at Chamber of Commerce Cafe.

Birmingham—Southeastern Technology Association, F. C. Weiss ('13), Secretary, Alabama Power Co., Birmingham, Ala.
☞ Luncheon—First Wednesday of each month at 1 o'clock at the Hillman.

Boston—Technology Club of Boston, Dr. Robert Seaton Williams ('02), Secretary, M. I. T., Cambridge, Mass.

Bridgeport—Technology Club of Bridgeport, Howard L. Stone ('14), Secretary, 2814 Main Street, Stratford, Conn.

Buffalo—Technology Club of Buffalo, E. Earle Root ('10), Secretary, Buffalo Standard Ink Corp. Buffalo, N. Y.
☞ Luncheon—First Thursday of month, 12.30 p.m. at Buffalo Chamber of Commerce.

Butte—Technology Association of Montana, C. D. Demond ('93), Secretary-Treasurer, 704 Main Street, Anaconda, Mont.

Charleston, W. Va.—Technology Club of West Virginia, James B. Pierce, Jr. ('11), Secretary-Treasurer, P. O. Box 932, Charleston, W. Va.
☞ Luncheon—Third Saturday in each month at 7.30 p.m., at Edgewood Country Club, Charleston, W. Va.

Chicago—Technology Club of Chicago, Henry A. Pemberton ('03), Secretary-Treasurer, 732 Monadnock Building, Chicago, Ill.
☞ Luncheon—Tuesdays at 12.30 p.m. at Engineers Club, 314 Federal Street, Chicago, Ill.

Chile—Technology Club of Chile, William W. Stevens ('98), Secretary, Braden Copper Co., Rancagua, Chile.

China—Technology Club of China, William A. Adams ('08), Secretary-Treasurer, 39 Nanking Road, Shanghai, China.
☞ Luncheon—First Saturday of the month, at 12.30, at the Carlton.

Cincinnati—The Cincinnati M. I. T. Club, John M. Hargrave ('12), Secretary, Cincinnati Tool Co., Cincinnati, Ohio.
☞ Luncheon—Tuesdays from 12.00 to 2.00 p.m. at the Schuler Café, 626 Vine Street (2d floor).

Cleveland—Technology Club of Northern Ohio, C. B. Rowley ('12), Secretary, care of H. W. Johns-Manville Co., Superior Avenue, N. W., Cleveland, Ohio.

Connecticut Valley Technology Association, Ernest W. Pelton ('03), Secretary, 77 Forest Street, New Britain, Conn.

Dayton—Dayton Technology Association, W. H. Kiefaber ('08), Secretary-Treasurer, 601 East Monument Avenue, Dayton, Ohio.
☞ Luncheon—Tuesdays at 12.15 at the Dayton Engineers Club.

Denver—Rocky Mountain Technology Club, Glenn D. Jones ('13), Secretary, 1910 E. 22d Avenue, Denver, Col.

☞ Luncheon—Wednesdays from 12.30 to 1.30 p.m. at Colorado Electric Club, Chamber of Commerce Building, Denver, Col.

Detroit—Detroit Technology Association, Joseph N. French ('11), Secretary-Treasurer, 2098 Woodward Avenue, Detroit, Mich.

☞ Luncheon—First Wednesday of each month at 12.30 at the Detroit Board of Commerce.

Duluth—Technology Club of Lake Superior, Duluth, Minn.

Fall River—Technology Club of Fall River, Arthur E. Hirst ('13), Secretary, 55 Madison Street, Fall River, Mass.

Harrisburg—Technology Club of Central Pennsylvania, Farley Gannett ('02), Secretary, Telegraph Building, Harrisburg, Pa.

Hartford—Technology Club of Hartford, G. W. Baker ('92), Secretary, Box 983, Hartford, Conn.

Hawaii—Technology Club of Hawaii, Norman Watkins ('98), Secretary, Box 385, Honolulu, T. H.

Indianapolis—Indiana Association M. I. T., Frank B. Shields ('07), Secretary, Fletcher Trust Building, Indianapolis, Ind.

☞ Dinner—Second Monday of each month at 6.30 p.m. at the University Club.

Japan—Technology Association of Japan, Takuma Dan ('78), Secretary-Treasurer, 344 Awoyama Harajiku, Tokio, Japan.

Kansas City, Mo.—Southwestern Association M. I. T., Hermann Henrici ('06), Secretary-Treasurer, 222 Commerce Street, Kansas City, Mo.

Lawrence { Technology Club of the Merrimack Valley, John Arthur
Lowell { Collins, Jr. ('97), Secretary, 67 Thorndyke Street, Lawrence, Mass.

Los Angeles—Technology Club of Southern California, Paul E. Jeffers ('12), Secretary, care Mayberry & Parker, Pacific Electric Building, Los Angeles, Cal.

☞ Luncheon—First Wednesday of each month at the University Club.

Louisville—Technology Club of Louisville, L. S. Streng ('98), Secretary, Louisville Gas & Electric Co., 311 West Chestnut Street, Louisville, Ky.

Manchester—Technology Club of New Hampshire, Walter D. Davol ('06), Secretary-Treasurer, 819 Elm Street, Manchester, N. H.

Milwaukee—Technology Club of Milwaukee, J. F. Blackie ('04), Secretary, care Milwaukee Coke & Gas Co., Milwaukee, Wis.

☞ Luncheon—Every Thursday noon at the University Club.

Minneapolis—Technology Association of Minnesota, Harold E. Young ('06), Secretary, 15 South 5th Street, Minneapolis, Minn.

Montreal—Technology Club of Lower Canada, E. B. Evans ('06), Secretary, 357 St. Catherine Street, W., Montreal, Canada.

New Bedford—Technology Club of New Bedford, Richard D. Chase ('92), Secretary-Treasurer, 607 Purchase Street, New Bedford, Mass. Secretary *pro tem*, Charles F. Wing, Jr. ('98), 36 Purchase Street, New Bedford, Mass.

New Haven—New Haven County Technology Club, Roy L. Parsell ('14), care Winchester Repeating Arms Co., New Haven, Conn.

New Orleans—Technology Club of the South, J. H. O'Neil ('10), Sanitary Engineer, Rapides Parish, Alexandria, La.

New York—Technology Club of New York, Frank P. Montgomery ('02), Secretary, 17 Gramercy Park, New York, N. Y.

Niagara Falls—Niagara Falls Technology Club, Norman Duffett ('11), care Union Carbide Co., Niagara Falls, N. Y.

Panama—Technology Club of Panama, W. F. Grimes, Jr. ('08), Balboa Heights, Canal Zone.

Paris—Technology Club of Paris, Director, Rev. George Crocker Gibbs ('00), 8 Rue de Richelieu, Palace Royal Hotel, near Place du Theatre.

Peking—Technology Club of Peking, Ziang Yien Chow ('15), Bureau of Municipal Administration, Department of Surveying, Peking, China.

Philadelphia—Technology Club of Philadelphia, Headquarters, Engineers Club, 1317 Spruce Street, M. B. Dalton ('15), Secretary-Treasurer, Liberty Mutual Insurance Co., 608 Chestnut Street, Philadelphia, Pa.

Pittsburgh—Pittsburgh Association M. I. T., Francis Foote ('16), Secretary, Jones Building, Pittsburgh, Pa.

Pittsfield—Berkshire County Alumni Association of M. I. T.

Portland, Maine—Technology Association of Maine, Joseph A. Warren ('91), Secretary, Cumberland Mills, Maine.

Portland, Oregon—Technology Association of Oregon, C. A. Merriam ('06), Secretary-Treasurer, 20 Seattle National Bank Building, Seattle, Wash.
☞ Luncheon—Every noon at the Hazelwood Lunch, Portland, Ore.

Providence—Technology Club of Rhode Island, Clarence L. Hussey ('08), Secretary-Treasurer, 100 High Service Avenue, Providence, R. I.

Rochester—Technology Club of Rochester, Virgil M. Palmer ('03), Secretary, Kodak Park Works, Eastman Kodak Co., Rochester, N. Y.

St. Louis—St. Louis Society of the M. I. T., Amasa M. Holcombe ('04), Secretary-Treasurer, Office of Chief of O. D., Washington, D. C.

Salt Lake City—Intermountain Technology Association, Walter H. Trask, Jr. ('06), Secretary-Treasurer, University Club, Salt Lake City, Utah.

San Francisco—Technology Association of Northern California, Headquarters, Room 1107, 833 Market Street, San Francisco, Cal., Capt. Howard F. Clark ('12), Secretary-Treasurer, 3d Corps, A. P. O. 784, A. E. F. John R. Brownell ('01), Secretary *pro tem*, 525 Market Street, San Francisco, Cal.
☞ Luncheon—No regular date, but quickly arranged on occasion.

Seattle—Technology Club of Puget Sound, H. H. Whithed ('11), Secretary-Treasurer, care P. S. T. L. & P. Co., Seattle, Wash.
☞ Luncheon—Third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle, Wash.

Spokane—Inland Empire Association of the M. I. T.

Springfield—Technology Club of Springfield, R. C. Albro ('07), Secretary-Treasurer, 499 Main Street, care Fred T. Ley & Co., Inc., Springfield, Mass.

Syracuse—M. I. T. Club of Central New York, J. S. Barnes ('08), Secretary, 204 Harvard Place, Syracuse, N. Y.

Urbana—Tech Club of the University of Illinois, Arthur C. Willard ('04), Secretary, University of Illinois, Urbana, Ill.

Washington—Washington Society of the M. I. T., E. J. Casselman ('15), Secretary, 3519 Lowell Street, N. W., Washington, D. C.

Worcester—Technology Association of Worcester County, Louis E. Vaughan, ('02), Secretary-Treasurer, 4 Fenimore Road, Worcester, Mass.

SUSTAINING MEMBERS OF THE ALUMNI ASSOCIATION

Louis W. Adams, '03
*Charles M. Baker, '78
James C. T. Baldwin, '88
Spaulding Bartlett, '90
Zenas W. Bliss, '89
Philip D. Borden, '73
James C. Boyd, '93
Henry G. Bradlee, '91
Frank A. Browne, '06
George O. Carpenter, '73
*George E. Claflin, '88
E. Pomeroy Collier, '78
Joseph W. Crowell, '04
Harry H. Cutler, '81
Jere R. Daniell, '97
Daniel J. Danker, '15
William C. Dart, '91
Herbert N. Dawes, '93
George A. Draper, '76
Nathan Durfee, '89
Theodore A. Foque, '88
George E. Hale, '90
George W. Hamilton, '80
Franklin W. Hobbs, '89
Charles F. Hopewell, '94
Arthur T. Hopkins, '97
Seth K. Humphrey, '98
Edward L. Hurd, '95
Clarence M. Joyce, '03
Charles W. Kellogg, Jr., '02
William J. Knapp, '06
Eugene H. Laws, '96
Richard W. Lodge, '79
George Holt Lukes, '92
Sampson D. Mason, '70
Miss Susan Minns, '81
James P. Munroe, '82
Atwood C. Page, '10
William B. Page, '93
William I. Palmer, '91
William H. Pratt, '94
Raymond B. Price, '94
Charles W. Ricker, '91
C. Snelling Robinson, '84
Dwight P. Robinson, '92
Allen H. Rogers, '90
J. W. Rollins, '78
Henry F. Ross, '82
James B. Russell, '70
William O. Sawtelle, '99
Alfred H. Sawyer, '88
Richard E. Schmidt, '87
George O. Schneller, '00
Lewis J. Seidensticker, '98
Henry D. Shute, '92
Joseph C. Smith, '88
Frank A. Smythe, '89
George F. Starbuck, '97
William C. Stearns, '71
Gerard Swope, '95
Henry P. Talbot, '85
Henry H. Tozier, '96
Leonard Tufts, '94
Etheredge Walker, '99
Joseph E. Walworth, '95
Leonard C. Wason, '91
Willard H. Watkins, '95
Belvin T. Williston, '77
Frederick W. Wood, '77
Henry E. Worcester, '97
George M. Yorke, '93
Albert G. Zimmerman, '93.

July 1, 1919

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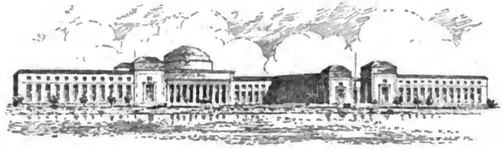
* Deceased.

COLEMAN DU PONT, '84
President of the Alumni Association



The Technology Review

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Robert E. Rogers, *Editor*, Massachusetts Institute of Technology, Cambridge, Mass.

Vol. XXI JULY, 1919 No. 3

THE ANNUAL COUNCIL MEETING

General Coleman du Pont, '84, the new president — reports of splendid activity during a discouraging year — the promise of the future

The seventieth and Annual Meeting of the Alumni Council was held at the Engineers' Club, Boston, Monday, May 26, 1919. The usual informal dinner was served at 6.30 P.M., with an attendance of forty-one. Maj. Alexander Macomber, '07, just back from overseas service, was salad orator. The meeting was called to order at 7.45 by President Morss, with an attendance of fifty-three, as follows:

President (retiring), Henry A. Morss, '93; president-elect, Coleman du Pont, '84; secretary-treasurer, Walter Humphreys, '97.

Executive Committee: Orville B. Denison, '11; Charles R. Main, '09; Carl W. Gram, '09; Kenneth Moller, '07.

Ex-presidents: Frederic H. Fay, '93; Henry J. Horn, '88; Francis R. Hart, '89.

Representatives-at-large: Z. W. Bliss, '89; S. G. H. Fitch, '00; C. W. Aiken, '91; Bradley Dewey, '09; Russell Robb, '88.

Class representatives: '68, R. H. Richards; '72, C. Frank Allen; '75, Thomas Hibbard; '76, Charles T. Main; '83, Horace B. Gale; '84, Harry W. Tyler; '85, Arthur D. Little; '95, H. K. Barrows; '96, J. A. Rockwell; '97, Charles Bradlee; '98, S. K. Humphrey; '00, Ingersoll Bowditch; '01, Robert L. Williams; '02, F. H. Hunter; '04, M. L. Emerson.

Representatives of local associations: H. N. Dawes, '93; Charles W. Eaton, '85; Everett Morss, '85; R. A. Hale, '77; John C. Chase, '74; Walter D. Davol, '06; Charles F. Lawton, '77; A. D. Maclachlan, '96; Frank L. Pierce, 89; Charles M. Spofford, '93; George E. Russell, '00; B. G. Philbrick, '02; A. G. Robbins, '86; Frederic W. Fuller, '96.

Guests: Dr. R. C. Maclaurin; James W. Rollins, '78; Alexander Macomber, Professor R. E. Rogers, '07; Mr. Scully, '15.

The business on the call for the meeting was: " Election of three members to the Nominating Committee, appointment of standing committees, annual reports of officers and committees, proposed change in By-Laws concerning the term of office of president and new administration, consideration of further report on "The Tech."

The records of the previous meeting were read and approved.

The following annual reports were read, accepted and ordered placed on file: Report of the Secretary-Treasurer, Report of the Auditors, Report of the Committee on Permanent Funds, Report of the Alumni Fund Committee of 1912, Report of the Runkle Memorial Committee, Report of the Massachusetts Institute of Technology Committee on National Service.

It was VOTED: That it is the sense of the Council that Mr. Gibbs, upon his return from the Technology Bureau in Paris, should receive $1000 from the War Funds, as a present of appreciation.

Reports were read, accepted and ordered placed on file: Athletics, Budget and Finance, Tech Show, Musical Clubs.

The Council balloted for members on the Nominating Committee for three years, and the following were elected: Henry A. Morss, '93; Frank L. Locke, '86; Orville B. Denison, '11.

The Nominating Committee nominated members for the standing committees, and by vote the following were declared elected:

To the Committee on Assemblies: W. R. Mattson, '13, until 1924.

To the Committee on Permanent Funds: R. H. Richards, '68, until 1922.

To the Committee on Publication of the TECHNOLOGY REVIEW: Wilfred Bancroft, '97, until 1923 (replacing D. G. Robbins, resigned); Arthur T. Hopkins, '97, until 1924.

To the Committee on the Historical Collection: Paul C. Leonard, '17, until 1920 (replacing C. M. Baker, deceased); Professor A. E. Burton, until 1924.

The Committee recommended no changes in the special committees, i. e., the Alumni Fund, the Runkle Memorial, the Revision of the Constitution and By-Laws.

The Executive Committee recommended to the Council the following proposed change in the By-Laws: A new section, to be called Section 6, of Article 1, to read as follows: "The elected officers of the Association shall take office each year at a date to be fixed by the Council and not later than July 1."

This proposed change may come before the Council for action after thirty days from date of publication in the TECHNOLOGY REVIEW.

Professor Tyler spoke to the Council on the work on the proposed War Records and suggested an early meeting of the Association of Class Secretaries.

Professor Tyler spoke further on the question of reorganizing the Technology Club, and announced that a Smoke Talk would be held in the Walker Memorial on Tuesday, June 10, in co-operation with members of the Instructing Staff.

President Morss then introduced President-elect Coleman du Pont, who addressed the Council and acknowledged the honor one received in being elected president of the Association. He spoke of the fact that people outside of Boston do not realize what is being done here at Technology and that those who live about here absorb the knowledge concerning the Institute through the papers and through their contact with Technology men. It is his belief that during the next few years the Alumni Association can in an unusual way help Technology and the student activities. He suggested that the problem of the alumni relation to "The Tech," if properly handled, gives as an example an opportunity for work on the part of the alumni.

Dr. Maclaurin next addressed the Council and stated how fortunate it was, in his belief, that the Alumni Association has as its new president one who is so interested in the work of Technology and who has such a broad outlook. He believes that the conditions now are abnormal, as confirmed by the experience of the Deans, who were recently at Technology from all parts of New England in conference. They all told the same story of the demoralization of the student body which, however, does not mean at all the depravity of boy nature at this time. It is a fact that the colleges have relatively few in the upper classes, and the larger part of the student body are members of the lower classes and have, therefore, been at the colleges for so little time that they have not assimilated the traditions of the schools. At Technology almost one-half the students are freshmen, and for some time the influence of the upper class men has been depended upon for training the under classes. He suggested that the students looked, foolishly perhaps, upon the Faculty as their natural enemies, and are on that account all the more ready to receive advice from the alumni. He suggested that this is a time of great importance, for never was there a time that offered a greater opportunity for Technology. He has been at the Institute for almost ten years and never has there been so many letters of inquiry from foreign countries as he has received during the past three or four months. He believes it is due to the splendid achievement of our men in the war and the general interest taken by people throughout the world, because of the war, in technically trained men.

MORE FOREIGN STUDENTS THAN EVER BEFORE

Students at the Institute from other countries number more than ever before this year, there being about one hundred and fifty in this group. There are notable increases in students from Russia, Norway and Spain, the numbers being ten, eleven and five respectively. England, Denmark, Greece and Turkey are the other countries of Europe represented at the Institute.

In South America, Chile has been a country sending very few students here. A prime reason for this has been the existence of the government universities with free tuition. The advantages of education in the United States have been discovered through the investigations of a number of representatives, and there are now at the Institute seven men from this southern republic.

Colombia equals its best previous record with four, while five other countries maintain their number of last year. Mexico has five men, and three Central-American countries have smaller numbers. Canada has not diminished the number of students notwithstanding the war. The Orient, represented by China and Japan, has some fifty men in the school, a number sufficiently large so that there is a Chinese Club in addition to one of Latin-American students and the larger, all-embracing Cosmopolitan Club, with its twenty-five nationalities.

ARMY NOTE

In a course conducted at Technology by a sergeant, there are several lieutenants, a half dozen captains, and a lieutenant-colonel.

REPORT OF THE SECRETARY-TREASURER FOR THE YEAR 1918-1919

For the first time in the history of the Alumni Association, the administration has extended from May of one year to the May of the following year instead of being coincident with the calendar year.

The present administration took charge of the Alumni Association after the Annual Meeting of the Association in May, 1918, and surrenders its charge to the incoming administration at the Annual Meeting on May 26, 1919.

At present, and for several good reasons, the financial year of the Association remains coincident with the calendar year, and for the sake of comparison the following statistics are as of the date of January 1, 1919.

The membership in the Association on January 1, 1918, was seven thousand five hundred and fifty-four, to which were added the graduates of the classes of '18 and '19 amounting to four hundred and fifty, the class of '19 because as a class it was graduated in October, 1918, after an intensive program. To these were added by election fifty-eight, making a total of eight thousand sixty-two, but during the year one hundred died, which leaves the balance on January 1, 1919, of seven thousand nine hundred and sixty-two, of whom three hundred and forty-three are life members.

During the year, dues were received from three thousand three hundred and twenty-six members, the percentage of those who have paid their dues has dropped from fifty-six and one-half per cent of last year to forty-eight and one-half per cent of the membership. This is readily accounted for by the war and by the large number of our members who have been in service to whom automatically dues notices were sent but to whom second notices were not sent, and with the understanding that the men in service would not be called upon to pay their dues unless they saw fit themselves upon the receipt of the formal dues notice.

For this administration there have been five meetings with an average attendance of thirty-one. The Executive Committee called a special meeting in September at which time it was voted to hold the Council meetings every other month rather than monthly unless the Executive Committee found reason for calling the Council together. This program was followed except that a special meeting was called for the last Monday in April.

Rather than to report in detail what has happened during the year of this administration, President Morss' complete and admirable report of the activities of the Association is referred to as printed in the April number of the TECHNOLOGY REVIEW, Volume XXI, page 143, and is submitted as the Annual Report of the Administration.

Since the Annual Dinner, when Mr. Morss made this report, two meetings have been held besides the Annual Meeting of tonight, and at these meetings the question of co-operation between the Alumni and "The Tech" has been discussed. The report by the Alumni Advisory Committee on Undergraduate Publications made at the last meeting has been accepted, whereby the Alumni will cease active control and representation upon the Board of Editors of "The Tech" on July 1, 1919.

The question of the re-establishment of the Course in General Studies, the Course IX of the time of General Walker, has been discussed and a committee has been appointed to consider this question.

The annual election has taken place and nomination to the Corporation of term members has been made.

The president of the Technology Clubs Associated, Dr. Godfrey of Philadelphia, has appeared before the Council and outlined the plan for a meeting of the Technology Clubs Associated in Philadelphia in September, 1919. An interesting program was outlined with plans to use this meeting to start an interest in the All-Technology Reunion proposed for 1920.

During the past year, by vote of the Alumni Council, when it has been impracticable to obtain a quorum of the various standing committees their duties have been assumed by the Executive Committee except in the case of the General Nominating Committee. Because of the absence of so many members from the various Standing Committees, the reports from the Standing Committees are abbreviated in numbers and in content.

According to the regulations and by-laws, the accounts of the Association have been audited and a report is made to the Auditing Committee upon the basis of an examination by the certified public accountants, Messrs. Patterson, Teele & Dennis. By this report it is found that in 1918 the surplus account was added to by the amount of $136.43. This is in spite of a deficit of the TECHNOLOGY REVIEW amounting to $563.74.

An attempt has been made, upon the recommendation of the Council this year, to reduce the volume of the TECHNOLOGY REVIEW by using a different font of type and by lessening the margin of the pages of the REVIEW, with the result that the January number of 1919 had one hundred and forty-four pages, twenty-two pages less than the January number of 1918, which had one hundred and sixty-eight pages. The April number was reduced from one hundred and seventy-six in 1918 to one hundred and fifty pages in 1919. In spite of this reduction, however, the cost of publication has advanced on account of the advanced price in paper and in labor.

Practically all of the money obtained from sustaining members may be accounted for by the increased cost of the publication of the REVIEW. Some of this money has purposely been credited to the REVIEW because of the subscriptions which have been continued to the men in service who have not paid their dues for the past year. The REVIEW has entered the organization of the Alumni Magazines Associated, and will, it is likely, receive increasing income from advertisements of national advertisers, who, through this organization, will see fit to advertise in alumni magazines.

While the amount received from dues for the past year was reasonably large, the per cent of members paying their dues dropped noticeably, and the question will come before the Council as to what steps should be taken toward increasing its revenue if it purposes to extend its activities.

Respectfully submitted,

WALTER HUMPHREYS,
Secretary-Treasurer.

TREASURER'S STATEMENT FOR 1918

ASSETS

Cash	$3,680.06	
Accounts receivable	1,200.94	
Notes receivable	1,000.00	
Furniture and fixtures	901.35	
Inventory accounts	981.84	
		$7,764.19

LIABILITIES

Accounts payable	$5.40	
Life Membership account	300.00	
Advance payments	21.00	
Organizations	248.92	
Committee on National Service	6,528.80	
Income, 1919	121.00	
		$7,225.12
Surplus account		539.07
		$7,764.19

EXPENSE, 1918

Secretary's salary	$500.00	
Labor, alumni office	2,777.89	
Postage, printing and stationery	961.75	
Carfare, telephone and telegraph, etc	67.35	
Collection expense	6.32	
Council expense	27.00	
Traveling expense	66.67	
Miscellaneous expense	221.03	
All-College Rally	134.44	
		$4,762.45
10% depreciation		100.15
REVIEW:		
Editor's salary	$500.00	
Advertising Manager	600.00	
Office labor	619.21	
Paper	2,196.60	
Postage	347.79	
Printing	3,839.87	
Supplies and expense	112.72	
		8,216.19
		$13,078.79
Excess income over expense		136.43
		$13,215.22

INCOME, 1918

*Sustaining membership	$1,296.00	
Dues, 1918	3,347.00	
Back dues	275.00	
Interest and discount	471.05	
Gifts	15.00	
Annual dinner, 1918	35.54	
Office profit	940.18	
		$6,379.77
REVIEW:		
Subscriptions	$3,606.00	
Back payments	274.00	
Advertising	2,898.75	
Other income	56.70	
		6,835.45
		$13,215.22

*$337.00 of this amount was credited to TECHNOLOGY REVIEW for subscriptions of men known to be in service.

REPORT OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY COMMITTEE ON NATIONAL SERVICE

THE Massachusetts Institute of Technology Committee on National Service respectfully submit the following report of work for the past year:

The first real work of the committee was to find a successor to Mr. Lansingh as director of the Paris bureau, and fortunately it made a most excellent selection in Mr. Gibbs.

From the reports coming to the Women's Auxiliary it is certain that the work of Mr. Gibbs in Paris has been most efficient and has brought forth much praise, even from other than Tech men.

Our original request for subscriptions for this work was for the year ending 1918, and the committee, after that date, made a renewed plea for the continuance of the 1918 subscriptions for the year 1919, it being their opinion that owing to the end of the war, men arriving in Paris would need money for various purposes, and that the demand for money for this period might exceed the actual war-time demands.

Our fear for the financial distress of the men has not been realized, and the time of continuing the Tech bureau will probably not be as long as anticipated, owing to the rapid demobilization of the army, and it is expected to close the Tech bureau in August or September. Mr. Bemis of our committee is now in Paris and is expected home soon, and we have asked him to consult with Mr. Gibbs as to the time of closing the bureau, and will take action on this matter on Mr. Bemis' return.

Our financial report is as follows, including the subscriptions from the Corporation:

RECEIPTS	
Corporation subscriptions	$18,095.00
Alumni	33,844.80
Total	$51,939.80
DISBURSEMENTS	
War Service Auxiliary	$18,600.00
Paris Bureau	13,966.56
American University Union	4,000.00
"The Tech"	3,023.24
War Records	1,862.29
Collection of funds	1,054.65
Washington Office	759.74
Miscellaneous	1,154.64
Total	$44,421.12
Balance on hand	7,518.68
	$51,939.80

A committee has been appointed by the Council to prepare and publish a Tech war record, and it has been suggested that any balance we have in the treasury be used for this purpose. The committee would agree to this, but has doubts about collecting more money from the alumni if such money is to be used for a war record rather than for the avowed purpose of the subscription, which was for war service; without at least asking the consent of the donors.

This committee especially recommends that the great service done by the Women's Auxiliary under the able and inspiring leadership of Mrs. Edith Cunningham, and the equally great work done by Lansingh and Gibbs in Paris, with full records of their work, be given a proper recognition in the war records of Technology.

A colonel of railway engineers, not a Massachusetts Institute of Technology man, wrote to the War Service Auxiliary:

"What a splendid work you have done. One has a heritage when he has Tech for an Alma Mater, such as no other institute gives, and how splendidly, too, her sons have done."

James W. Rollins,
Chairman.

May 26, 1919.

HALF A MILLION FOR RESEARCH

Noyes and Hale to be directors for the Rockefeller Foundation

An appropriation of $500,000 to promote fundamental research in physics and chemistry has been announced by the Rockefeller Foundation. The fund, to be administered by the National Research Council, will be utilized to support during a five-year period several fellowships whose holders working in the laboratories of co-operating universities, will turn over to American educational and industrial institutions the results of their investigations.

The plan, expected to build up a continuously expanding corps of expert investigators, will be put into operation by the selection of a group of " fellows," scientific college graduates expecially adapted to research and of an age (twenty-five to thirty years) when " imagination and creative powers are at their best." They will experiment in institutions adequately equipped for such work, in the basic principles of the two sciences, rather than their adaption to particular products, leaving the latter feature to private research organizations, largely maintained by the great industrial corporations, which, with the general public, will benefit by the investigations planned. In no case, the Foundation said, will an investigator have any proprietary interest in his discoveries.

The fellowships, according to the announcement, will lead their holders to important posts in industrial laboratories or to professorships in colleges, create more favorable conditions for research in American universities and lay the basis for more effective national participation in the sharpened industrial competition expected with the advent of peace.

The plan will be administered by Professors Bumstead, of Yale; Kohler, of Harvard; Millikan, of Chicago; Arthur A. Noyes, former president of Technology, in co-operation with Bancroft, of Cornell; Simon Flexner, director of the Rockefeller Medical Institute, and George E. Hale, M. I. T., '90, director of Mount Wilson Observatory, members of the Research Fellowship Board of the National Research Council. The latter organization, operating under the auspices of the National Academy of Sciences, and by executive order of the president, is in close touch with the government, and has representatives in London, Paris and Rome, filling the newly established position of scientific attaches to the embassies.

REPORT OF THE ALUMNI FUND COMMITTEE

On behalf of the Massachusetts Institute of Technology Alumni Fund Committee I submit the following report:

Receipts

Subscriptions received to March 31, 1919	$598,412.37
Income	23,132.75
Total	$621,545.12

Expenditures

Appropriated account Technology Site	$20,000.00
Appropriated account Educational Equipment	355,000.00
Appropriated account Walker Memorial	160,000.00
Appropriated account Dormitories	40,000.00
Appropriated account Reunion	19,672.06
Cash on hand	26,873.06
Total	$621,545.12

As payments on account of subscriptions are due October 1 each year and as the first payments were due October 1, 1912, the following table shows the receipts from subscriptions to September 30 each year:

Receipts to September 30, 1913,	$145,679.36
Receipts year to September 30, 1914,	81,569.14
Receipts year to September 30, 1915,	74,870.78
Receipts year to September 30, 1916,	115,127.64
Receipts year to September 30, 1917,	92,852.51
Receipts year to September 30, 1918,	55,844.85
Receipts six months March 31, 1919,	32,468.09
Total	$598,412.37

On February 7, 1919, a list was made of subscriptions which at that time had been neither paid nor cancelled, and classified as to date due, and at the same time we have shown the amount by which these subscriptions have been reduced during the year ending February 7, which corresponds approximately to our cash receipts during that period:

Due		Reduction During the Past Year
October 1, 1912,	$3,093.00	....
October 1, 1913,	4,822.00	$170.00
October 1, 1914,	8,566.00	1,000.00
October 1, 1915,	9,397.00	1,000.00
October 1, 1916,	12,431.00	2,600.00
October 1, 1917,	8,888.00	1,500.00
October 1, 1918,	7,693.00	20,700.00
October 1, 1919,	21,225.00	7,000.00
October 1, 1920,	16,833.00	1,000.00
October 1, 1921,	8,419.00	
October 1, 1922,	993.00	
	$102,360.00	$34,970.00

Although the total of these unpaid subscriptions is about $102,000, there will probably be little more received from subscriptions due October 1, 1915, and earlier, while there will be a considerable loss on subscriptions due at later dates, and it would therefore seem that a reasonable estimate for the future receipts of the fund is somewhere from $40,000 to $50,000.

During 1918 the Executive Committee of the Corporation appropriated $15,000 to educational equipment and $50,000 to Walker Memorial.

Yours truly,

EVERETT MORSS,
Chairman.

May 26, 1919.

COMMITTEE ON PERMANENT FUNDS

Annual report, December 31, 1918

BALANCE SHEET

ASSETS

Cash	$1,847.44	
Securities (purchase price)	21,095.00	
Personal Accounts	7,585.00	
Income in Suspense	200.00	
		$30,727.44

LIABILITIES

Rogers Scholarship Fund Capital	$10,744.13	
Loan Account	10,707.59	
Life Membership Fund	8,207.21	
Alumni Fund of 1880	1,068.51	
		$30,727.44

Income for the year 1918 amounted to (net)	$856.76	
Interest on scholarship loans amounted to	144.42	
Loans repaid (from 33 beneficiaries) amounted to	2,565.00	
		$3,566.18

Loans were granted to eight beneficiaries, to the amount of $900.00.

REPORTS OF ALUMNI ADVISORY COMMITTEE

A successful half-year of undergraduate activities during trying circumstances

Mr. Allan W. Rowe, '01, chairman of the Advisory Council for athletics, presented a report for the undergraduate sports since January, 1919, of which the following is a summary. During the functioning of the Student Army Training Corps, up to Christmas, there could be no student athletic activities, as the military work took up all the available time. But as soon as school opened again in January it was decided to make the attempt. Since there was some question of assessing the student tax this year, a referendum was taken of the student body, which returned an overwhelming vote in favor of assessing half the tax for the remainder of the year. This was done, budgets prepared and modified to meet new conditions, and the work begun under Mr. Kanaly, who had been retained during the period of the Student Army Training Corps work. The success of the spring field day and of various teams showed the wisdom of the decision to begin again this year. The Advisory Council is at present making a complete revision of its by-laws and rules in the light of past experience.

The Advisory Committee of the Musical Clubs reported that the clubs were organized as usual in January, and in spite of the short season for rehearsal, six concerts were arranged and successfully given. An extended trip was, of course, impossible, but the thirty-third Annual Spring Concert was given, on March 7, at the Hotel Somerset, with the success long met with by one of the oldest of our activities. The membership of the clubs was the largest in their history, aggregating seventy men. The finances were well handled and a substantial balance will remain to be invested, as last year, in a government bond.

Like the Musical Clubs, Tech Show met with an overwhelming rush of candidates this spring at the try-outs of the Show, which had to be given this year, later than usual, over Memorial Day, on account of the impossibility of securing a Junior Week at the usual time in April. After the hard times of the last two years the management has been completely reconstituted, and a thorough new system of accounting installed, due to the fact that the progressive break-up of the personnel of the management in 1917 and 1918 left the reports of the organization in a very unsatisfactory condition. Notwithstanding this fact, last year's show, "Let Her Go," saw a profit of one thousand dollars paid to the American University Union in Paris, plus over four hundred dollars for a sinking fund for this year's show.

The show this year, "A Doubtful Medium," was given at the Hollis Street Theatre, to the great satisfaction of all who saw it — a far better place than the Opera House — and in spite of the fact that it was considered not wise to raise the price of tickets, although the cost of putting on the show has almost doubled in two years, a substantial profit was realized. Since these profits need no longer be paid into the athletic treasury, and since the show has long since proved its high value not merely as a means but as an end, this money will be used for the sinking fund, and to enable successive managements to obtain much needed permanent equipment, which will in the long run greatly cut down the cost of presentation.

THE APRIL COUNCIL MEETING

The associate clubs plan a resurrection—an All-Tech reunion in 1920—Technology the balancer of American industry—"The Tech"

ALTHOUGH the April meeting of the Council is usually in the slack time between the annual dinner and the annual business meeting, this year it proved to be full of business and interest, particularly as regards the meeting of the Tech Clubs Associated at Philadelphia this fall, and the All-Technology reunion of 1920. Alumni interest and activity are undoubtedly on the increase after the taxing months of war, and they are shown to be alive nowhere more than in the proposal to publish a great book," Technology and the Nation," a documented study of the growing value of the Institute in the scientific and industrial life of America.

There were also the usual nominations at this time of year and a report on "The Tech" as a continuing alumni organ.

After the announcement of the results of the annual election, which will be found in the official lists at the beginning of this issue, President Morss announced that it is the sense of the Executive Committee that as there are to be no formal graduating exercises this year, there should be no June alumni celebration. There was no opposition to this.

President Morss then announced that as the war is now over the Technology Clubs Associated is planning to resume its annual meetings this fall and introduced Dr. Hollis Godfrey, '98, president of the Technology Clubs Associated, who presented and discussed the plans now under consideration for the meeting this coming fall. Dr. Godfrey stated that he had discussed the plan he has to present with Dr. Maclaurin and a number of prominent Technology alumni. Dr. Godfrey told the Council that he had learned from the war that the need for technical men in public service was greater than ever before. He believes that this should be discussed and provided for in two main ways: (1) the coming fall meeting of the Technology Clubs Associated and (2) the All-Technology reunion to be held probably in 1920. He wants the results of these two meetings to tell principally what Technology men are to do in the future, backed by what they have done in the war. The proposal is to have the meeting of the Technology Clubs Associated in Philadelphia in September and to accomplish two things: (1) to be a big advertising booster for the All-Technology Reunion in 1920 and (2) to produce in five divisions a book entitled, " Technology and the Nation."

The five divisions agreed upon are: (1) Army, (2) Navy, (3) Federal Service, (4) Basic Industries and (5) Technology and the other four. Each division is to be divided into two parts, (a) service, and (b) the men behind the line who did the extra work necessitated by the other men joining the service. It is planned to have five principal speakers: Crowell for War, Roosevelt for Navy, Baruch for Federal Service, Schwab for Basic Industries and Maclaurin for Technology. Dr. Godfrey said that the best thing that Tech did in the war was to bring about profitable action. There are three days planned for the meeting, the 18th, 19th and 20th of September. Visits to plants are to be cut out and all the time applied to the meetings of the five branches mentioned. The executive committee of the Drexel Institute has extended an invitation to the Technology Clubs Associated to use their plant for all the meetings. It is proposed that each of the branches of the engineering industries shall have a vice-chairman to work with the industries of the country to establish offices in Philadelphia, with permanent secretaries for three or four months to emphasize the importance of Technology in the industrial world. The industries are to be invited in as equal partners in this meeting, presenting their viewpoint for Technology to hear, Technology in turn presenting to the industries its viewpoint. Dr. Godfrey said that he had presented this plan to the Council for constructive criticism and stated that he was ready to answer questions.

Dr. Godfrey, in answer to a question, stated that there is to be a special committee to arrange for any plant visits that may be desired. As to papers presented, Dr. Godfrey said that he had in mind only brief papers to be presented, more emphasis being placed on the resultant book to be produced following the joint discussions of Tech men and the industries.

President Morss then announced that the Technology Club of Central New York has evolved a plan along this line which Mr. T. H. Skinner, '92, briefly outlined at this time. Mr. Skinner stated that three meetings ago of the Council there was an appeal from Dr. Maclaurin and the Faculty to suggest curriculum changes aiming to make Technology a more potent factor in the industrial world. Mr. Skinner reported this to his club and asked for action on the matter. Two different meetings were held and Mr. H. W. Jordan, '91, secretary of the club, drew up a report showing the position as citizens that Tech men should take. It is felt by the Central New York Club that the technical man in the past has been too narrow, sticking too closely to a strictly engineering line. It is felt that every Tech man has an opportunity to take an active interest in public affairs without entering the political field. The war has served to bring this matter to public attention. Mr. Skinner then read the club's letter to Dr. Maclaurin. Mr. Skinner said that Technology, to him, seems to be the center of the teeter between capital and labor and that Tech men should surely lend their efforts to a proper balance of the teeter. Mr. Skinner stated that the report was too long to read but that the Technology Club of Central New York was eager to help in spreading the gospel of the value of Tech men in public service. He presented through President Morss to Mr. Godfrey the report of his club, with the hope that it could fit in with the plan of the Technology Clubs Associated. Mr. Skinner closed by saying he hoped that one of the results of the September meetings of the Technology Clubs Associated would be needed changes in the Institute curriculum.

Mr. A. T. Hopkins, '97, stated that he hoped there would be large representation of the Faculty at the September meeting, so that they could get in touch first-hand with the proper relations of Tech and the industries. He hoped that some way might be devised to have such men present. Dr. Godfrey answered this by stating that it is hoped that a fund can be raised for the industries and engineering activities to make sure that men like the Faculty may be present at the meeting as guests. Professor C. F. Allen, '72, stated that he thought it extremely advisable that Faculty members should attend this meeting, he feeling that the Tech professors do not get into intimate touch with the industries often enough. Further, the outcome of the proposed educational changes would have to come from the Faculty and, therefore, the members should be on the ground to hear all the discussions. He hoped, however, that undue emphasis would not be laid on tearing to pieces what is being done now in the field of education. To him the most beneficial course for mental training and basic principles is the course in Mechanics and he hoped that this course could still continue to be emphasized as it is at present at the Institute. In closing he stated that it would be the Faculty who would have to finally separate the chaff from the wheat and therefore thought it an admirable idea that there be a large Faculty representation at the meeting. Dr. Godfrey in reply stated that it is hoped by the committee that this meeting is to furnish a basis of the needs of the industrial world and not to make specific recommendation for changes in the curriculum, this last to be left entirely to the Faculty. In other words, all speeches and discussions should refer to needs of the technical world in general and not be applicable to Technology alone, but to all technical schools.

President Morss then requested an expression of approval or disapproval of the scheme and it was

VOTED: That the Council record its hearty approval of the plans proposed by the Technology Clubs Associated.

The question of the proposed All-Technology reunion in 1920 was next discussed. President Morss announced that the Executive Committee is in favor of a reunion in 1920, and then every subsequent five years and it was

VOTED: That the next All-Technology reunion be held in 1920, and plans be at once started.

President Morss then called attention to the awkwardness of the term of the Alumni Association president, ending as it does in May, and therefore suggested that the plans for the reunion be referred to the Committee on Assemblies to take up with the incoming president when he takes office. President Morss further referred the possibility of changing the by-law governing the term of the president to the Executive Committee for possible change.

Mr. C. W. Gram, '09, then presented the report of the special Nominating Committee to present to the Council nominations for members in the various Advisory Councils on Undergraduate Activities as follows:

ATHLETICS: Dr. J. A. Rockwell until 1922 (Mr. Lawrence Allen is serving on the Committee until Dr. Rockwell returns from overseas); Hunter, '02, until 1922.

BUDGET AND FINANCE: H. S. Ford until 1922.

TECH SHOW: Alexander Macomber, '07, until 1922.

MUSICAL CLUBS: Dudley Clapp, '10, until 1922.

UNDERGRADUATE PUBLICATIONS: Alden H. Waitt until 1924.

(Signed) PAUL C. LEONARD,
O. B. DENISON,
CARL W. GRAM, Chairman.

It was

VOTED: That the men nominated should be declared elected.

In the absence of Mr. William R. Greeley, '02, Mr. P. C. Leonard, '17, presented the report of the Alumni Council on Undergraduate Publications on the question of co-operation with "The Tech."

PRELIMINARY REPORT OF THE ADVISORY COMMITTEE ON UNDERGRADUATE ACTIVITIES]

Pursuant to a request from the Alumni Council, this Committee presents the following report:

The financial history of "The Tech" is divided into periods (a) as a weekly; (b) as a tri-weekly or daily; (c) after appointment of Advisory Council; (d) during war period.

The question now would appear to be whether return should be made to (c) or new relations established, also disposition of surplus accumulated under (d).

The war completely interrupted the student management of "The Tech," and the alumni, in order to save it from annihilation, and serve the war-time interests of the Institute, made Paul Leonard a receiver to straighten out its affairs and run it during the war. Thus the publication has been thrown upon the alumni, and they have been financially responsible for its existence. Previous to this the undergraduate body was not assuming any financial responsibility, but left it to the Alumni Advisory Committee and " The Tech " Board.

From every point of view, therefore, the evolution of " The Tech " into an alumni publication places upon the alumni the responsibility for the proper disposition of the present good-will and assets.

The present situation is that a new undergraduate Board was elected as of April 1, and is at present issuing the paper under Mr. Leonard's continuing supervision, although the books were closed on the preceding volume on April 1.

The recommendations of this committee as to the present situation are:

First: That the financial interest of the alumni in the combined publication be deemed to have terminated on April 1, and that Mr. Leonard be instructed to liquidate as receiver (or administrator) the affairs as shown on the balance sheet of that date on or before July 1, 1919, in which liquidation proper reserves shall be allowed the new Board to issue papers to unexpired subscriptions for which the old Board may have received payment; and that any profit accrued since the balance sheet of April 1 on business since that date, be considered to belong to the new undergraduate publication, together with any good-will value and privilege to solicit renewals in the existing alumni subscription list.

Second: That direct control by the representative of the alumni, Mr. Leonard, be gradually given over to the undergraduate Board, as they can be organized to take it, and that active control by the alumni cease absolutely by July 1, 1919.

Third: That the surplus accumulated during the period of alumni control, and which may be defined as the amount remaining from the transactions prior to April 1, as shown by the balance sheet of that date, after all just claims shall have been paid and allowances made, and all possible assets liquidated, shall be turned over to a duly constituted committee of the Alumni Council as trustee, and which shall be administered through the treasurer of the Alumni Association by the Advisory Committee as it may be reconstituted, for the benefit of " The Tech."

The committee has conferred with the chairman of " The Tech," "Technique" and " Voo Doo," and will obtain the opinion of the Institute committee before submitting to you its final report on future policies.

Mr. Leonard explained that since the new board of " The Tech " was elected on April 1 he has given over the whole responsibility of the publication to the new board, subject to his veto of unwarranted expenditures. In answer to a question he stated that he believed the question of whether or not the paper should continue as a partial alumni publication should be left to the undergraduates to decide. Mr. Jasper Whiting, '89, hoped that the undergraduates would still deem it advisable to act as a partial publicity medium for the alumni, thus holding the alumni subscribers. Mr. Leonard stated that the thinking undergraduates still want a certain amount of alumni control and that a scheme along these lines, involving possible incorporation, is already underway by Mr. Capps, the new general manager of the paper. In response to a question as to whether it was intended to pay the old bills of " The Tech," Mr. Leonard stated that a lot of them are owed to concerns now out of business and otherwise scattered, so that it seems to no one on the committee advisable to pay the older bills. He further stated that they are practically all outlawed through lack of funds. A number of members of the Council, however, stated that we should at once pay all old bills and give the boys a fresh start.

The recommendations of the report were adopted as printed in the accompanying text in this issue of the REVIEW.

On the call for new business it was

VOTED: That the Advisory Council on Undergraduate Publications be asked to make a report at the next meeting of the Council after conference with the Board of Editors of "The Tech" in regard to the future relations of "The Tech" and the Alumni Association.

Mr. R. A. Hale, '77, called the attention of the Council to the forthcoming meeting of delegates of the engineering societies of the country with reference to "National Board of Public Works," to be held in Chicago early in May and hoped that the Technology Clubs Associated could work in co-operation with this meeting.

ORVILLE B. DENISON,
Secretary pro tem.

SELSKAR GUNN LEAVES TECHNOLOGY

Health expert cables his resignation from Paris

A NUMBER of changes in the personnel of the biological department at the Institute are announced. In the first place Professor S. M. Gunn, '04, who has been on leave for a couple of years, has resigned from his position. This notice coming by cable is as yet without an explanation, but it is surmised that he is to enter permanently into public work of some larger kind. Professor Gunn was selected by the Red Cross and International Health Board to assist Dr. Livingston Farrand in the work in France of combating infant mortality and tuberculosis, and he has remained with this humanitarian effort till now. It seems not unlikely, therefore, that his resignation is in order to be free to continue national or international work of similar character.

On May 1, Professor W. T. Sedgwick left Boston for a trip across the Continent, being scheduled for a course of six weeks in the summer school of the University of Berkeley, Cal. He paused a little while in New York City to lecture in the public health courses given by the Municipal Service Association. During Dr. Sedgwick's absence his courses will be carried on by Professor S. C. Prescott of the department.

Another of the instructing staff of the department of biology, has been given leave and Murray P. Horowitz, B.S., instructor in biology has gone to Oklahoma to carry forward the sanitary survey of the State that he began last year. This is the first intensive survey of an entire State for sanitary reforms, and on account of the war demands in personnel, the program of last year was cut short. Mr. Horowitz is to complete it according to original specifications.

Professor Prescott will carry forward Mr. Horowitz's courses in the Institute, while those which he is giving at Wellesley will be cared for by Dr. F. H. Slack, who is also instructor at the Massachusetts Institute of Technology.

COLEMAN DU PONT, '84

The new president of the Alumni Association — as seen by the *American Magazine*, November, 1918

"GENERAL DU PONT is behind it."

That has come to be the fashionable verdict of the financial world whenever rumors spread that some gigantically important deal is brewing. And sometimes the conclusion is right, for Coleman du Pont has done and is doing more big things than almost any other financier or captain of industry in America. Wall Street never knows where his activities are likely to break out next. He confines himself to no one groove.

One day he is disclosed as the builder right in the heart of the Wall Street district of the largest sky-scraper in the world at a cost of $30,000,000. Next he electrifies the whole financial and business community by quietly buying up control of the world's best-known insurance company, the Equitable Life, with its $600,000,000 of assets and outstanding insurance of $1,500,000,000 after a succession of battles royal among kings of finance, including J. P. Morgan, E. H. Harriman and Thomas F. Ryan, for control of this stronghold of wealth and power. The most famous hotel keeper in America dies, and scarcely has the public ceased to read tributes to his worth from all classes from President Wilson down, when the news leaks out that Coleman du Pont has taken over the establishment, the Waldorf-Astoria. Or a company is organized to extend financial assistance on merciful terms to thousands of workers and others in needy circumstances and, lo, du Pont is at the head of it.

"How have you been able to do so much, in so many different lines?" I asked this sleepless, ubiquitous doer.

"I haven't done much — I don't do much, I pick other men to run things for me," he replied with a directness of speech that is characteristic of his actions.

"But how do you go about making your selections of men?" I further queried.

"You can hire a good doctor or lawyer or other professional man; but you have to find a good business man," was his response.

"Where or how do you begin to look for the good business men?" I persisted.

"Where? I'm on the lookout for the right kind of men everywhere, anywhere and always. I've found them North and South; I've found them in factories, in banks, in steel mills, even under the ground — in coal mines. Whenever I spot a man who has made a good start I watch him, I follow his progress, I try to get a correct record of his ability, I find out all I can about the results he produces."

"What are the qualities he must have?" I probed.

"Ability."

I smiled. "How do you analyze, how would you define, ability?"

"Ability is the thing that gets results honestly," was the emphatic reply.

"Get a man with ability," he added, "who also has enthusiasm — and, of course, absolute honesty and fairness; then give him full responsibility, give him whole-hearted support, and you will get the one thing you want, results."

"I have been told that once you pick a man for a job you never interfere with him, but put all decisions, all responsibility, directly and wholly up to him," I remarked.

"Certainly if I am to hold him responsible for results, he must have freedom to make all decisions. If a man wants my advice, my judgment, I am always ready to give it to him; but I insist that he make the final decision, that the action taken must be his, not mine, as he is responsible for the outcome, not I.

"Some men make the mistake of overruling their lieutenants, of not accepting their judgment. How can you expect to develop the best that is in a man if you don't allow him to exercise his judgment and don't let him shoulder the entire responsibility for the results? If a man fails to make good, if his judgment repeatedly proves unsound and the results are a failure, then of course I replace him."

As a matter of fact, Coleman du Pont has the reputation of uncanny judgment in choosing lieutenants to manage his enterprises. He has developed almost as many young business geniuses as Charles M. Schwab has. His record reflects and proves this, for success has crowned every project he has taken up — and they have been many, varied and monumental — in the course of his eventful, dynamic career.

His military title, by the way, came through his interest in the National Guard. His work in that connection led four successive governors of Delaware to appoint him a brigadier-general on their staffs.

The name "du Pont" conjures up in the public mind riches and powder. Coleman du Pont was born poor, and never had anything to do with powder, except in his capacity as a grimy, work-a-day coal miner until he had made his mark and his fortune in other things. His father, Antoine Bider-Pont, though of the famous du Pont family of Delaware, had no interest in the ancestral powder organization, but was engaged in several industrial enterprises in Kentucky at the time Coleman was born, in Louisville, on December 11, 1863. After his preliminary schooling, finding he had a liking for engineering, young du Pont proceeded to the famous Massachusetts Institute of Technology. Here he played as hard as he studied. Six feet four inches in height and weighing two hundred and ten pounds, not a pound of it superfluous fat, he made an ideal captain of the football team, stroke of the crew and captain of the baseball nine. He could run one hundred yards in ten seconds. He was also a crack shot, a powerful swimmer, a tug-of-war giant, and a doughty competitor in the wrestling and boxing rings. Breaking bronchos was another of his favorite sports. All this, however, did not prevent him from graduating creditably.

He did not aim at starting at the top or halfway up the ladder when he sought a job. He actually began as a mule driver in a coal mine, at Central City, Kentucky. From mule driving he graduated to the blacksmiths' shop in the mine, and later, through various grimy and sweaty stages to the status of a full-fledged miner.

Next he was made mining engineer, and his work became so effective that he was finally appointed general manager of the property.

It was significant of his democratic make-up that the first thing he did on gaining chief power was to launch a comprehensive plan for the remodeling of Central City, including the erection of comfortable homes for his co-workers, the laying of good streets, and roads, the installation of a modern sewerage system, water works, electric lighting system, etc. He also encouraged the community to build schools and churches, to open parks and to maintain recreation grounds. He did it all without suggestion or taint of paternalism. Indeed, the old inhabitants still delight to relate how he democratically attended weddings and baptisms and funerals and was altogether as one of them.

For ten years he remained in that field. Then, when he investigated and found that the highest salary paid in the whole coal region was four thousand dollars, he looked for a wider sphere. The steel industry was then attracting some of the best brains of the country and yielding generous rewards. He opened negotiations with the heads of the Johnston Steel Company of Johnstown, Pennsylvania, whom he knew, and they gladly elected him general manager. Here he not only made good as a steel operator, but found an ideal field for his irrepressible energies in building street-car lines. The presidency of the Johnstown Passenger Railway Company was one of the many offices he filled — this one, in fact, he still fills.

In a few years he had built traction lines in Pennsylvania, New York and New Jersey, and had also embarked on coal-mining enterprises, with such success that he decided to retire from active business. He bought extensive farm lands in Maryland and Delaware, took up residence there, and began to conduct scientific farming on a mammoth scale, including the breeding of high-grade draft horses, pedigreed cattle, sheep and other farm animals. He was an enthusiast on the subject of good roads, and he conceived the idea of building a model road clear through the state of Delaware, a project which, at a cost of more than two million dollars, is now well in hand.

Cincinnatus-like, Farmer du Pont received a call to more important duties. The head of the famous du Pont Powder Company had died, and a family council resulted in a summons to Coleman to take the helm. He was not quite forty. The life of a farmer, he had quickly discovered, did not afford the fullest scope for his head and hands. He had all the money he needed, but other urgings and motives impelled him to re-enter the business arena.

What Coleman du Pont did for America's premier powder plant forms history. When he took hold there were seven clerks in the main office of the company — although this company had important interests in associated explosive enterprises. When he stepped out in 1915 there were some three thousand employees in the main office. The first thing he did was to amalgamate all the different offices and scores of sub-offices controlled by the du Ponts into one strong, efficient corporation. Production was systematized and standardized. Able, high-priced managers were installed and clothed with large responsibilities and were offered premiums for results. For four or five years Coleman du Pont arose at five o'clock in the morning and, as he once remarked, " thought powder, talked powder, ate powder, dreamed powder all through the day and night." By-products, formerly little regarded, were manufactured into two hundred and fifty different commodities. When the call came for munitions to fight the Huns, the du Ponts almost overnight were able to multiply their output by one hundred per cent by instantly placing on construction work an army of forty thousand men.

Then having placed the organization on a smooth working basis, Coleman du Pont did what for him was the natural thing: he stepped out. The rehabilitation, reconstruction, the upbuilding of the organization, had interested him intensely; but that job finished, he was content to leave the management of it to others. He must needs tackle something new, something difficult, something demanding daring. So he sold out his powder interests at a profit of a million for each of the more than thirteen years in which he had managed them.

It was at this stage (1915) that he decided to build the $30,000,000 Equitable Life Building. Scarcely was the paint dry when he coolly purchased, chiefly from the Morgan interests, a controlling amount of the stock of the Equitable Life Assurance Society itself, with the avowed intention of placing ownership of the company completely in the hands of its half million policy holders. Other financial giants had fought for possession of this all-powerful financial weapon and had talked of mutualizing the company. Du Pont talked little but did mutualize it, selling his stock to the policy holders at a net loss of $2,000,000. When asked at the time why he had carried through so costly a transaction, du Pont replied: " I thought it was only right that the company should be owned by its policy holders, and I was glad, therefore, to be able to put it through. I guess I can stand the loss."

That last remark, "I guess I can stand the loss," throws light on Coleman du Pont's method of handling men. Said one of the young men whom he "discovered" and who is now building up a remarkable reputation:

"One funny characteristic of General du Pont is that, unlike most capitalists, he does not go into a thing simply for the money there is in it for himself. I know from actual experience. More than once, when I have been with him in a proposition, he has balked at accepting a fair share of the profits. 'You did most of the work; you're entitled to the results,' he has insisted. Naturally, when you are associated with a man of that type, you put the best that is in you into whatever he asks you to take hold of. Maybe the reason he has always made a lot of money is that he never was too blamed anxious to make a lot of it. He enjoys doing a big or difficult job far more than he enjoys any monetary reward."

The emphasis General du Pont places on results led me to hint that he is not partial to theorists.

"No. I want practical men, men who show they can deal with things and men rather than figures on paper," he replied vigorously.

"Do you give preference to college men in looking for young aides?"

"If a man has ability and ambition, a college education will help him," he replied. "But here also I want to look into results. *Was he a nonentity at college? Did he make no impression while there? Or was he singled out by his college mates for distinction and honors? Was he made captain of any athletic teams? Was he elected president of his class? Or did he carry off signal honors at his exams? Did he do anything to make his mark in one direction or another? Was he a mediocre nobody, or did he demonstrate he had something worth while in him?*

"Between a college man of ability and little ambition and a non-college man of ability and whole-souled ambition I prefer the latter every time. No amount of education will make up for a lack of never-say-die ambition. Ambition is what drives a man forward. It forces him over all kinds of hurdles. The fellow with one hundred per cent ambition, even though he may not have transcendent ability, will go farther than the fellow with ability, but who lacks ambition."

General du Pont, it should be explained, does not as a rule personally select candidates for the less responsible positions in any of his organizations; his forte is picking lieutenants, men whom he can place in charge of an enterprise, men who have already had business experience. It is his success in this direction that has enabled him to control and run half a score of important enterprises at one time, enterprises as diverse as coal mines and the largest powder plant in the world, thousands of farming acres and the largest hotels in the land.

"Tell me," I said, "just how, for example, you hit upon the man you did hit upon to manage the various coal companies you acquired down South."

"Certainly. Long ago a young fellow drove mules for me. He was the best mule driver I ever had. His father before him was a good man. The young fellow — his name is Shelby J. Gish — sent himself to college after three or four years in the mine. At college he played good football, rode bicycle races and the like. Later he began buying coal lands for himself. Although he started with nothing, he finally owned and operated a coal mine. He then commenced developing oil and gas in that country — Kentucky — which field had never been touched by any of the many capitalists interested in oil and gas lands. It wasn't hard for me to see that a man with that amount of originality and developing and constructive ability, with his practical knowledge of coal, was the right man to run all of my coal properties. And results showed that I made no mistake."

The Chemical National Bank of New York, for many years the largest and most influential in America, controlled by the oldest and most aristocratic families in New York, and later by Hetty Green, decided a little more than a year ago that it needed an infusion of new blood, preferably from out of town, so as to widen the institution's connections. General du Pont was consulted and he recommended a thirty-seven-year-old Southern banker, Percy H. J. Johnston. When this young financial genius stepped into the senior vice-presidency, the bank's deposits totaled $35,000,000. In twelve months they had soared to $75,000,000, a gain of three quarters of a million dollars every week! Johnston is now looked upon as one of the most notable " comers " in the whole financial community.

" I first met Johnston," the general explained in reply to my queries, " when he joined the Citizens' National Bank of Louisville as a clerk. His fine physique, his excellent manners, the way he handled himself, impressed me, though he was then a very young man and had had no opportunity to make a record for himself. The next time I went down he had been promoted. The bank's deposits meanwhile had gone up. I learned that he was a hard worker. Next time I went down he had been elected vice-president, and the deposits were still rising. I made it my business to know him at close range, and I was convinced he was big enough for New York."

Next I asked about the qualities of the man General du Pont installed to run the Waldorf-Astoria, Lucius Boomer.

" Mr. Boomer has made good in every hotel proposition he has ever been responsible for," said the General, with typical directness. " He is very able, most practical, a good business man, and honest, hard working — scrupulously fair, always."

General du Pont, it may not be known, is perhaps the largest hotel owner in America. He built the imposing du Pont hotel and the Hotel McAlpin, New York, the latter among the largest in the world. His chief reason for acquiring the Waldorf was that he had in Boomer a man who could run it successfully both from the public's and the profit standpoint. " Men make an organization; not its bricks or its machinery," is a favorite du Pont maxim.

He applied this principle when he took over the direction of the du Pont Powder Company.

" We then engaged," he said, " the best men we could find. We paid six men very large salaries, and results proved they were the cheapest labor we had, for their brains made many thousands for the company annually." How successfully this system of choosing the right caliber of men worked out is illustrated by the fact that the business of the company was developed from a few millions to over three hundred million dollars annually. These six executives, as well as the rank and file of the du Pont skilled workers, were placed on a bonus system, reflecting the general's invariable rule for giving his co-workers a fair share of the results earned.

" I never engage an executive who isn't fair," he remarked.

" What do you mean by ' fair '? " I asked.

" I mean that he must deal fairly and squarely with everybody and that, in particular, he must have the right attitude toward labor. There is a lot of talk about possible trouble of a serious and widespreading nature between employers and employed after the war. I personally am not alarmed, for if labor is treated as it should be treated, it will have no real occasion to kick over the traces. I have always managed to get along pleasantly with labor, and I will never select a lieutenant who is not so constituted that he cannot help but treat his workers fairly and uprightly. The man who has not learned how to get along smoothly with workers is not the type of man to place in a responsible executive position.

" In addition to being fair, the man I want must, of course, have other qualities.

I want a man who is fearless: courage, self-confidence, self-reliance, are very important essentials. The business game cannot be played by a mollycoddle.

"Then the right type of man is democratic. He must not consider himself a superior sort of personage. He must actually feel democratic; it is not enough that he try to pose as democratic — he must be democratic, otherwise the veneer, the sheen, would wear off, for you can't fool a body of intelligent American workmen for very long. He must ring true.

"Another point: I always want a man who looks after his health. A strong, upstanding, square-shouldered fellow, whose muscles are whipcord rather than putty, is usually apt to forge ahead against all sorts of odds. The man who is of inferior physique and who doesn't look after his health properly is less likely to succeed. Good health, in a sense, is at the base of all business achievement, for the pace nowadays is too gruelling for weaklings. The time a man's best effort is most needed is when a crisis has to be faced; and unless a man is thoroughly fit physically, the extra strain and stress and emotion are apt to play havoc with him at the crucial moment. Year after year I kept myself so strictly in trim that my weight did not vary five pounds from what it was when I left college.

"To win in the business game — or any game, including the game of life itself — you must enjoy it. There is something wrong with a man who does not enjoy his work more and more as he gets older. This is not only my own experience but I find it is the experience of a number of successful men with whom I have talked. A man should grow happier as he grows older, and he can grow happier — I don't see how he can fail to grow happier — if he is on the right terms with his work.

"Here again the question of health enters. To enjoy business, to enjoy life, to be fit to carry out hard or big things, a man must be in sound physical condition. Therefore, any young man who aspires to become a leader in his line should early learn the vital importance of strengthening, building up and tuning up his physical machine. I have emphasized the necessity for having ambition; but ambition is not likely to get a man anywhere unless he has a head, a body and hands capable of carrying out his ambition. Mere wishing gets a man nowhere. He must back up his wishes with action, and action is dependent in no little measure upon a man's physical stamina.

"Don't misunderstand me. I am not a stickler for what is ordinarily understood by the term 'hard work.' Once I place a man in charge of something I don't care a rap whether he works ten hours or only one hour a day — although I confess I have never known a man who could produce the right results by one hour's effort a day.

"The higher type of man can produce the best results if given an entirely free hand. He must be allowed freedom to do things in his own way. Also, the responsibility of making decisions must be left to him. I never decide things for any of my lieutenants. They must make their own decisions. How, otherwise, could I hold them responsible for results? But don't you see that under this system a man knows and feels, if success is achieved, that he is entitled to the credit, not me? This develops a man as nothing else can.

"Of course, not all men are capable of filling positions which carry the responsibility of making important decisions. Some men can work wonderfully for other people; they are ideal tools, or implements, when guided by others. But they lack initiative, originality, self-courage. They are capable, faithful, valuable followers, but not leaders."

"How can you tell which type a man is, and whether he can develop into a first-rate executive, resourceful, daring, progressive?" I asked.

"You have a feeling —" the general, for the first time, hesitated; he appeared puzzled. "I don't know what you could call it except 'intuition'; you sort of feel sure — something inside tells you that a certain man has the right material in him, and that he will develop into a big winner, a great result-getter."

"What are some of the characteristics that inspire this intuitive feeling?" I prodded.

"Brightness, alertness, pleasantness, on-the-toe-ness. Evidence of being practical, a doer, not a theorist or dreamer. A fine physique and robust health are important and attract. But, first, last and all the time, ability as proved by results. What has been his record as youth and man? What impression, what mark, has he made?

"From the very start a youth begins to shape his whole future career. What he does or fails to do, today, governs to a large extent what he will do or fail to do tomorrow. Business men — at least in business matters — are sternly practical. What they want to know about a man is, 'What has he done?' Each man writes his own answer. The sooner every young man in the country realizes this, the greater will be his chances of recognition, advancement and final success."

"Success," I asked, "real success, does not, apparently, consist of making enough money on which to retire, for you re-entered the business stage after quitting it once."

"No. This idea that so many people have that they will have a glorious time after they can retire, and that until then they must simply wrestle along somehow, in a rather joyless fashion, is wrong — as wrong as it can be!" General du Pont declared with fire. "If you haven't sense enough — or philosophy enough — to order your life and work so as to get genuine satisfaction and fun out of it as you go along, you certainly will not get any bumper measure of enjoyment when the day comes — if it does come — when you can step out of everything. There is more fun in producing, in creating something, whether it be a great building or an industry or only a dog kennel, than there ever can be in idleness. The person, therefore, who fails to derive satisfying happiness from his daily endeavors will enter only a fool's paradise when he quits work to enjoy — or rather suffer — leisure. Happiness in work not only goes hand in hand with success in work, but hand in hand with success and happiness in living. The retirement idol that so many people set before them is a delusion, a myth. If your work doesn't yield you satisfaction, money never will."

AN ASSISTANT FOR COLONEL COLE

By order of the president, Lieutenant James W. Boyer of Chelsea, who served during the war as head field clerk of the 26th Division, was appointed assistant professor of military science and tactics at the Massachusetts Institute of Technology.

Lieutenant Boyer, who is a graduate of Chelsea High School, enlisted in the regular army five years ago as a private. At the outbreak of the war he was appointed field clerk, and upon the formation of the 26th Division he was assigned to that organization. His service in that capacity was of such high calibre that he was commissioned in the regular army upon the personal recommendation of Major-General Edwards.

EDITORIAL—THE BEAVER

The nature-faking rodent—a wrong ideal for Tech men

The life of the beaver is rich in edifying material, but the preachments and morals concerning his life appear to have been made, mostly by censors and professional uplifters, without the golden facts. Their pointing to the beaver for lessons and teachments in the world of Nature would not be so bad if they called attention to actualities. The beaver ever has a purpose; he never works unless he has to do so, and that is possibly one day out of seven; he is efficient; and though his accomplishments are monumental, he is master of the fine art of rest.—The Saturday Evening Post.

In the pleasant days of old we believed what we were told,
  And we thought that books were true beyond mistaking,
Never thought that paws and maws took the place of Santa Claus,
  Never thought that Dr. Stork was —nature-faking.
But since Science, on the loose, has dispelled each ancient ruse,
  Proving Muir and Seton-Thompson gay deceivers,
We are not at all surprised, once the tale is analyzed,
  To be told that we are wrong about the beavers!

Beavers, folks said, never shirked, always labored, toiled and worked,
  Put in time and time-and-a-half and time again,
Worked by artificial light, Sunday morning, noon and night,
  A-constructing of their sub-aquatic den;
And each Tech man near and far, hearing what the beavers are,
  Shouted, "That's the way they work us down the line!"
So the Council passed a vote. On our letter-heads you'll note
  "M. I. T.—a Beaver rampant," for a sign.

But if the Sat. Eve. Post says true, here's a pretty how-de-do,
  And we'd better hunt to find another totem,
For the beavers now, they say, agitate the six-hour day,
  And will strike and sabotage until we vote 'em.
They have left the A. F. of L. and are headed straight for—well,
  Where the Bolsheviks and Wobblies are coal-heavers.
Those are foreigners and such that we don't respect too much,
  But to think we must admit it of the beavers!

Brothers of the Institute—let us can the lazy brute!
  Let us chuck him from our signs and our affections,
Let them say no more, by heck, that the beaver stands for Tech,
  Lest we lose by undesirable connections.
Let the beavers have their larks with the doctrines of Karl Marx,
  Never more to flaunt upon OUR letter paper.
Something that is SURE to go, a turbine or dynamo,
  Seems, to stand for M. I. T., the proper caper.

R. E. R.

WAR SERVICE BOOK TO BE PUBLISHED

Association of class secretaries discusses methods of obtaining information of Technology in the war — twenty-six classes represented

THE Association of Class Secretaries held a dinner in Walker Memorial, Thursday evening, June 19, the chief object of which was to discuss the problem before the War Records Committee, and methods of co-operation between the class secretaries and the committee for the purpose of publishing a record of the war services of Technology men. One of the important purposes of such a volume is naturally to pay homage to the men who have given their lives to their country's service; the volume would not be so much a memorial to individuals as a record of the whole service of the Institute and its men. The Alumni Council, recognizing the desirability of having a record of the activities of Technology men in military and civilian service during the war, appointed the War Records Committee of the following men: Dr. H. W. Tyler (chairman), Walter B. Snow, '82, Harry H. Young, '91, G. D'W. Marcy, '05, H. G. Pearson (Faculty). This committee held its first meeting June 6 in Walker Memorial, at which time the general problems of the committee were discussed and plans made for the approaching meeting of the Class Secretaries Association which was held last night.

After dinner Dr. Tyler passed around a provisional draft of the circular letter to alumni in regard to war service, and a tentative plan of the table of contents for the War Records Book. He then stated what the committee had done at its first meeting, and spoke of the necessity of complete co-operation on the part of the class secretaries and Technology men in general. Dr. Tyler then gave the general plan of the committee which is to organize a staff to collect the material, and put it in shape for publication. This staff would probably include a general editor, a military editor, a civilian editor, a secretary and clerical staff, who would have oversight of the preparation of the book, and the arrangement of its chapters, and also be responsible for co-ordinating the work of the different editors. The civilian editor would have charge of the service record of the civilians and would, with the committee, determine what kind of civilian service would be considered. The secretary and clerical staff would have more detailed work in following up missing men.

The question of financing such a publication was discussed by Dr. Tyler, who stated that the committee had $5000 available as working capital. This money is a balance left from the fund collected for the work of the Technology Committee for National Service.

Dr. Tyler then asked for suggestions and questions in regard to the work of the committee, and plans for obtaining the co-operation of every Technology man. Mr. Fay suggested that a letter with return form be sent to all Institute men requesting them to give statistical information and a brief personal statement of their services during the war.

The possibility of getting data from the records in the adjutant-general's office in Washington was discussed along with other methods of obtaining information of Technology men. Professor Pearson spoke of the help which the work already done by the War Service Auxiliary would be to the committee.

The Association passed a vote giving their hearty approval of this work. They also passed a resolution that notices should be sent to the alumni stating the financial needs of the committee and asking for a continuance of their support.

It is expected that each secretary will receive a report of the meeting and will as promptly as possible start work in his own class, verifying his list of addresses and if needful appointing a class committee which will be in active communication with the general committee and with the alumni office.

The detailed secretary's notes of the meeting are as follows: There were present: '68, Richards; '71, Rollins; '78, Collier; '80, Barton; '83, Chase; '84, Tyler; '86, Robbins; '88, Snow; '91, Young; '93, Glidden, Fay; '94, Prescott; '95, Brackett; '99, Hinckley; '00, Bowditch; '01, Williams; '04, Stevens; '05, Marcy; '06, Kidder; '09, Main; '10, Green; '11, Denison; '15, Scully; '18, Howe, Van Kirk; '19, Doten; '20, Coyle; '21, Worcester; '22, Scott (The Tech).

The chairman of the committee outlined the plans of the committee for organizing an editorial staff, enlisting the co-operation of class secretaries and others in collecting the information by a general inquiry circular, and circulating it when published. The Association passed a general vote approving the plans, and strong general interest was expressed.

It was also noted to be the sense of the meeting that the Alumni Committee on National Service should invite their monthly contributors to continue their payments for the support of the present undertaking and that the committee consider the practicability of enlarging the list of contributors by inviting new contributions from the alumni in general.

There was a general discussion of many phases of the problem, leading to the following suggestions:

FINANCIAL: Subscription and dollar deposits with the general circular of inquiry; advertising the ten-dollar edition in the REVIEW.

PRELIMINARY WORK: Announcement of plans in the July TECHNOLOGY REVIEW.

Each secretary will appoint himself or some other active representative or committee of his class to be in constant communication with headquarters. In the large recent classes careful arrangement should be made for distributing the work of correspondence by enlisting men from each department, they reporting to the class secretary or representative. Publicity at class reunions in the near future is important.

The list of addresses for each class should be checked up as soon as possible with the alumni office.

The co-operation of every fraternity should be sought.

QUESTIONNAIRE: This should be sent out to all alumni, if possible, by July 1, with a carefully framed letter of inquiry and an information blank to be returned. The envelope in which the material is sent out should have a special and attractive imprint. Opinion is somewhat divided as to whether stamped return envelopes should be used.

It is suggested that questions on which men would have to reflect shall be avoided, in order to guard against delayed reply. An early date of closing the polls should be emphasized.

It should be stated that all material, whether published in the book or not, will be turned over ultimately to class secretaries.

There shall be a request for the men to indicate the class with which they choose to be affiliated.

Every recipient should be asked to return the blank, whether he has been in war service or not. For this purpose, other questions, verification of address, etc., should be included. In following up men in recent classes, where changes of address are frequent, the original home address should be used also.

MISCELLANEOUS: Any war service before coming to the Institute should be included.

Civilian service might be based on the receipt of a salary, even if only a dollar a year, or on transfer of location; but men should be included, for example, who have been exempted from the draft on account of being engaged in important war industries.

Space might be economized by writing up the war work of organizations, as such; for example, Stone & Webster, with cross-references for men in the organizations.

The general arrangement would be by classes, with an alphabetical name index.

The Honor List of men who have lost their lives in service should be sent out with the inquiry circular, in order to be sure of its completeness.

Copies of the book would ordinarily be sent to the relatives of men in this Honor List.

The central office should be responsible for soliciting, receiving and compiling information. The class secretaries will be expected to assist, sending material, if desired, at the same time and calling up personally men who do not respond to the general inquiry. The central office will be expected to keep the secretaries fully and promptly advised as to returns.

It is desirable that the book should be published in time for the anticipated Alumni Reunion in June, 1920.

A new register of alumni is desirable if it can be financed, as the present undertaking will undoubtedly yield much important information.

H. W. TYLER,
Chairman War Records Committee.

NOTE TO CLASS SECRETARIES

(In connection with the accompanying memorandum of the recent meeting of the Class Secretaries Association).

The immediate requests to all class secretaries are as follows:

FIRST: To designate himself (or some other member of the class) for active co-operation with the War Records Committee.

SECOND: To see that the class list at the Alumni Office is as complete and accurate as possible in order that the general circular now in preparation for mailing about July 1 may reach everybody.

THIRD: To send as promptly as possible the best suggestions as to men who might be available for pay service, as general editor of the War Book, or otherwise.

Mr. G. D'W. Marcy, representing the Class Secretaries Association, may be consulted in regard to matters of procedure.

Replies to this note may be made to H. W. Tyler, Chairman of the Committee, Charles River Road, Cambridge.

M. I. T. MEN IN SERVICE

74 per cent of commissions to date, May 26, 1919

Men in service	2799
American Expeditionary Forces	1227
Navy	557
Aviation	479
Commissioned Officers (74%)	2091
Ambulance, Red Cross, etc. (A. E. F.)	62
Rank above Major	93
Citations	57
Deaths	108

ADDITIONS TO THE HONOR ROLL

May 23, 1919

WALCOTT, WILLIAM W., '01, March 16, 1919. Captain Medical Detachment, 101st Engineers, A. E. F. Died of " Military Tuberculosis."

CROSS, CHARLES R., JR., '02, October 8, 1915. American Distributing Service. Died at Military Hospital, No. 64, Dinard, France, result of automobile accident.

SMITH, CHARLES MCLEAN, '10, October 4, 1918. 308th Infantry, G Company. Died of wounds received in action in the Argonne.

ROGERS, RALPH TUPPER, '18, January 8, 1919. C. Q. M. (A), U. S. N. R. F. C. Died of pneumonia at Base Hospital, Pensacola, Fla.

SCHAFFER, HAROLD, '09, October 30, 1918. Sapper, Lan.-Corp. 7th Canadian Engineers, B. E. F. Killed in action near Thiers, France.

THYNG, ELMER FORREST, '15, January 16, 1919. 2d Lt. Company G, 1st Corps Headquarters. Discharged December, 1918. Died of pneumonia in Youngstown, O.

THOMSON, STUART, '09, March 23, 1919. Captain Ordnance Department. Discharged. Died in Brookline, Mass.

PELTIER, PAUL DESNOYERS, '19, April 1, 1919. 2d Lt., Sanitary Corps, discharged. Died from results of an accident in Asia Minor, at Eski-Sheheir.

CATTON, RICHARD B., '15. About May 1, 1919. 2d Lt., Air Service, Signal Corps. Died at Base Hospital at Savenay, France, after six months' illness.

ADDITIONS TO THE CITED LIST

May 23, 1919

Holmes, James Hill, Jr., '18, Captain Infantry. D. S. C. awarded posthumously for bravery in leading his Company at Soissons, France, July 18 and 19, 1918.

Dewey, Bradley, '09, Colonel, Chemical Warfare Service. Received D. S. C. Recommended by Secretary Baker for war work in U. S. A., April 6, 1919.

Canfield, Edward, Jr., '12, Lieutenant-Colonel Engineers. Awarded the D. S. M. for exceptionally meritorious and distinguished services while Assistant Chief of Staff, G-1, of the 4th Division, organizing entire system of supply for the Division.

Gaskill, Charles S., '99, Lieutenant-Colonel Engineers. Awarded D. S. M. by General Pershing for exceptionally meritorious and distinguished services, in charge of locomotives and car repair shops at Nevers, showing rare executive ability and engineering qualifications of the highest order.

Longley, Francis F., '05, Colonel Engineers. Awarded D. S. M. by General Pershing for exceptionally meritorious and distinguished services. He has been in charge of the Water Supply Service and as commanding officer of the 26th Engineers, a water supply regiment, since the fall of 1917, showing untiring energy, unusual initiative and good judgment.

MacLeod, Norman D., Major, 103d Field Artillery. Croix de Guerre, with palm.

Aultman, Dwight E., Brigadier-General, 51st Artillery. Croix de Guerre with palm.

Allen, Robert M., Sous-Lt. 40th Regt. Artillery, French Army. Regiment received Medaille Militaire. He received the Croix de Guerre with bronze star.

Compiled by Massachusetts Institute of Technology War Service Auxiliary, 491 Boylston Street, Boston, Mass.

CAMOUFLAGE APPARATUS AT M. I. T.

Building One houses most complete set in country—presented to Institute by Navy Department

On the second floor of Building One, at the Institute, there is one of the most complete camouflage sets in this country. The apparatus, drawings, and models came from Washington, New York, and Boston. After the signing of the armistice, Mr. Blume proposed to give the results of the research done by the Navy Department and the Emergency Fleet Corporation to Technology. He sent the camouflage theater, models and other apparatus. Mr. William A. Mackay contributed to this set many models designed in New York. A complete assortment of the results obtained and of instructions is also due to the kindness of Mr. Mackay. The camouflage apparatus would not be reposing in the Technology buildings if Mr. Henry C. Grover had not given orders to that effect.

Professor Peabody invites any one interested to visit the camouflage room. The visit must be made under the personal supervision of Professor Peabody, so only one or two are asked to come at one time.

HOW THE BOYS IN FRANCE SPENT CHRISTMAS

Other news of the A. U. U. and the Tech Bureau

The following is George Gibbs's account, received too late for the April "Review," of the Tech Bureau's Christmas dinner. There is also the first news we have had to date of M. I. T. men at the American University Union in London.

THE annual Christmas party of the Technology men in France was held at the Cafe Cardinal, Boulevard des Italiens, on December 21, 1918.

The following men were present: Hoffman Kennedy, '05, W. A. Hall, '88, John Lunn, '17, Tenney L. Davis, '13, George C. Gibbs, '00, W. W. Dodge, '16, Paul Buxton, '16, Raymond B. Haynes, '13, C. E. Fox, '14, A. W. Buck, '13, O. G. Norton, '15, Robert Miskowsky, '18, Kenneth Cunningham, '19, Donald R. Dixon, '14, W. N. Watson, '14, D. R. Buchanan, '18, Raymond Low, '16, James Irving, '18, J. W. Barker, '16, Guy Hill, '06, A. A. Ubelacher, '18, Francis S. Conaty, '17, Almerin Gowing, '15, Edward Y. Keesler, '17, Francis Swain, '15, D. H. McMurtrie, '15, A. R. Brooks, '17, John C. Bollenbacher, '09, Reginald Norris, '96, M. W. Pettibone, '16, Herbert W. Barrett, '18, George Sutherland, '16, C. A. Coleman, '16, George S. Stevens, '14, G. Hall, '20, Charles P. Kerr, '11, and Frederick B. Barns, '15.

Besides these, there were several guests who are frequent visitors of the Tech Bureau, among them Mr. Hooper, a mining engineer, a graduate of the University of California, also *reformé* soldier from the French Foreign Legion and Lieutenant Juttet, who during the war was an instructor at the Artillery School at Fontainebleau; among his pupils were Robert M. Allen, '16, and Fenton G. Elwell, '19. We had three other guests, also an excellent quartet from the Young Men's Christian Association; also from the Young Men's Christian Association a vocalist and his accompanist; another vocalist with an accompanist who were friends of a Tech man present, Mr. Hoffman Kennedy, '05, who lives in Paris.

The Cafe Cardinal is an excellent cafe at the corner of the Rue de Richelieu and the Boulevards, which is well arranged for a party of this kind. We had practically the second floor at our disposal. At five o'clock we held open house in a small room adjoining the dining room in which an eggnog was served. A number of men came in before dinner who were unable to attend the dinner. The dinner was held in a large and most attractive dining room, the table being arranged in the form of an elongated "T" and decorated with pine branches and red roses. It was a most cheerful sight to the boys when they came in. All were pleased that their interest and happiness were being looked out for on this side. The dinner was informal.

It was proposed by Lieutenant W. W. Dodge, '16, that after demobilization and the return of every one a reunion of the men who have been overseas and who were present at this dinner should be held in New York.

A little feature of the dinner was a small edition of the "Treasure Chest." A large number of small and useful articles have been sent from the Massachusetts Institute of Technology War Service Auxiliary in the various trunks; these consist of knives, playing cards, cigar lighter, tooth paste, shaving cream and so forth. About fifty of these things were done up in packages and packed into a basket, These were passed around after the last course; by this means each one received some gift from the Auxiliary through the Bureau.

Before the dinner we were pleased to receive a visit from Miss Marion Coes, '18, who came up with the Tech secretary, Miss Beakhurst, and looked in at the festivities and partook a little of our hospitality.

A gathering like this will be one of the pleasant memories of the boys who were overseas and who had the opportunity to be present.

George C. Gibbs.

The following bulletin from Paris, dated March, 1919, has been received and it clearly shows the type of work that is being done by the American University Union in Europe.

APOLOGY

Which is not an apology. The director is sorry he has let the interesting Bulletins slide, he's honestly been busy. One short Bulletin each month hereafter.

DINNERS

Each month — First Saturday at 7 p.m., Place, Restaurant "Procope," 13, Rue de l'Ancienne Comedie. Take "Metro" to Station "ODEON," on Boulevard St.-Germain and Rue de l'Ancienne Comedie is a block and a half distant.

These dinners are held regularly and at the same price — 20 francs — which includes good food, enough drinks, and some music. No formal speaking. Every Technology man in Paris should be there without fail, every Technology man passing through Paris on those dates should come. There is time for a "show" afterwards. You'll meet old friends and we'll keep up Technology traditions and its spirit.

THE TREASURE CHEST

Anything from the Treasure Chest is Free. Thank the Technology War Service Auxiliary, 491 Boylston Street, Boston, for its generosity; address, Mrs. E. C. Cunningham.

We have now — Colgate's Tooth Paste and Shaving Soap, Carborundum Stones, Corn Cob Pipes, Pipe Cleaners, Talcum Powder, some real B. V. D.'s and a few cotton pajamas, knit socks, very fine, lots of them.

AT THE "STUTE"

1944 students are now registered, and more are coming.

THE BUREAU

Don't forget to visit us whenever in Paris. Register in the Visitors' Book, see if your registration card is made or is correct. Ask for "Gibbs" Coffee or Tea in the Bureau at 5 p.m. any day.

AT PARIS UNIVERSITIES

Sorbonne: T. H. Meloy, '17; H. M. Baxter, '17; R. E. Gilbert, '19; B. C. Curtis, '17; C. L. Kingsbury, '18; E. P. Brooks, '17; I. T. Thornton, '17; F. H. Wells, '18; M. H. Stein, '18.

Ecole Polytechnique les Ponts et Chaussees: H. W. Brown, '15.

Bellevue (Fine Arts Department): W. D. Foster, '11, Adjutant and Instructor; P. L. Small, '15, Instructor; C. F. Cellarius, '16.

AT OTHER UNIVERSITIES

In England: K. R. Briel, '13; Austin Kuhns, '17; H. P. Thomas, '16.
Grenoble: Lyall Stuart, '19; I. R. Pray, '11.
Lyon: W. B. Baker, '15.
Toulouse: V. V. Bullard, '13. Beaune: R. H. Scannel, '17; E. B. Homer, '85; D. C. Jackson, Jr., '19.

PERSONALS

J. W. Barker, '16, is Assistant Adjutant-General, District of Paris.
Let us know what YOU are doing.

The fact that the Tech Bureau was first on the ground in Paris gives additional interest to the following account of the permanent club for American students which has grown out of the University Union. Great oaks from Tech Bureaus grow, so to speak!

At the Cercle Interallie, a reception was held recently in honor of the French Honorary Patrons of the "Maison des Etudiants." At this meeting Mr. James Hazen Hyde, chairman of the original committee of the "Maison," explained the merger of the interests of the "Maison" with those of the American University Union in Europe.

The Union has maintained, during the war, an American center and university club in Paris, where between twenty-five thousand and thirty thousand former students of American universities, who have been engaged in military service in Europe, have registered.

The Municipal Council of Paris presented to the original committee of the "Maison des Etudiants" a valuable piece of ground between the University of Paris and the Ecole des Beaux-Arts as a site for a building to serve as a center for American students in Paris and American educational interests in general in France. By an agreement between the local committee at Paris and the American University Union in Europe, the support is secured of a responsible and influential American organization.

Speeches were made by Mr. Hyde, representing the original committee of the "Maison," by Professor George H. Nettleton, as director of the American University Union, and by Mr. Henry B. Thompson, treasurer of the Board of Trustees, who has come from the United States to carry out the arrangements for the organization.

Mr. James H. Hyde, in the course of his speech, remarked:

"The purpose of this meeting is to explain to the members of the honorary French committee the future plans of our association, and at the same time to give the regular members of our committee an opportunity of meeting them.

"This very interesting project originated at a luncheon given by M. Hovelaque, to whom the honor of the idea belongs, but what actually permits us to put the project on foot is the great generosity of the city of Paris, which even before our entry in the war presented us with an admirable site for the 'Maison des Etudiants.'

"Later on the war developed the American University Union in Europe for American college men in military service in Europe, and it seemed accordingly desirable to effect a merger between the two associations. This was accomplished by a formal vote of both.

"Our association has already served to bring together American intellectual and academic interests in Europe. It has served at Paris as a bureau of information concerning American universities and schools, and as a home where the rectors and professors of the provincial universities of France, as well as of the University of Paris, have made American friends, and have discussed with them international educational questions. Thanks to the good will and perfect courtesy of the French, the union has already become, so to speak, a sort of important American intellectual center. We hope that in the future the 'Maison des Etudiants' will continue to fill this role with increasing success."

Professor George H. Nettleton, director of the American University Union in Europe, remarked:

"Our meeting today has deep significance. We meet here, French and Americans, in the moment of victory, in the city of Paris, impregnable city of liberty during the war and now the temple of justice for all the world. Side by side we have fought to defend the common democratic principles of liberty and justice.

"The Municipal Council of Paris has generously set aside an admirable site in the center of the educational institutions of Paris for a building for American students and American educational interests in France. It will be a home where Americans will be able to return to their French friends somewhat of the hospitality which the French have extended to them.

"This gift will, I know, deeply touch the heart of America. For us, for all the Allies, the soil of France is holy ground. It is consecrated by sacrifices which we have shared.

"Not one foot of this soil did France, even during the most critical moments of the war, think of relinquishing to the force of arms, but she has not hesitated to yield a part of that soil to the force of friendship. Built upon this consecrated soil the 'Maison des Etudiants' will be a permanent token of the friendship between France and the United States.

"This gift is twice blest. Given in times of war, it will recall in times of peace the common sacrifices which have rendered possible that peace.

"We trust that this word 'Union' will be prophetic. United by the common sacrifices of war, we are resolved to remain united for the common benefits and privileges of peace."

Mr. Henry B. Thompson, treasurer of the Board of Trustees of the American University Union, observed:

"I believe we have laid the cornerstone for a foundation on which we will build a structure, marking the permanent alliance of the academic worlds of France and America. The worlds of letters and science are great determining factors in the life of nations. We believe the life of France and of America will be enriched and strengthened by any bond that holds our universities in closer relationship."

The following have been elected officers of the Association in Paris: Professor George H. Nettleton, president; Professor William T. Brewster, vice-president; Professor Paul Van Dyke, secretary; Mr. James Hazen Hyde, treasurer.

The additional members of the Executive Committee are Professor James M. Baldwin, Mr. Robert W. Bliss, Judge Walter V. Berry, Mr. J. R. Carter, Mr. Blair Fairchild, M. Petit-Dutaillis, Director of the Office National des Universities; Dr. Edward Tuck.

TECH MEN IN LONDON

The Review has also received from George A. Mower, '81, an account of the big dinner at the London American University, at which several Tech men were present, including Colonel F. F. Longley, '05, U. S. A., who is at the head of the army educational scheme under which about two thousand students are now pursuing various courses in the various English universities.

Among the names printed in the list of diners, whom Mr. Mower notes as Technology men, are: G. H. Butler, J. E. Huber, E. A. Keenan, C. W. Sawyer, R. P. Wilder, K. W. Akers, A. M. Baehr, E. Flood, W. E. Knight, C. R. Messenger, and G. A. Mower.

The high table blazed with notables and dignitaries, as one might judge from the following paragraph of Mower's letter:

> The Lord Chancellor, in replying to the toast of "The King and President," made a very brilliant speech, eloquently expressing the high esteem in which the president and the American people are held in this country. Lord Bryce, when called upon to propose the health of the American Ambassador, was received with a perfect ovation by all our boys, and he appeared to be very much touched by this cordiality. The American Ambassador, as usual, made a very fine and dignified response. Sir Donald MacAllister, the vice-chancellor of Glasgow University, in response to the toast of the "Health of the British Universities," assured all our students that they would be welcome in every university in the country, and hoped they would be able to find much of interest while pursuing their studies on this side of the water. Dr. George E. MacLean, LL.D., formerly president of the University of Iowa, in responding to the toast of the American University Union in Europe, gave a stirring, as well as an eloquent, address which was received with great applause. He certainly knows how to talk to boys, and I think we all appreciate the work that he has done for education during his connection with the American University Union here in this country. He is now the acting director of the British Branch, and is a most fortunate choice.

PROFESSOR PARK IS SECOND TECHNOLOGY APPOINTEE

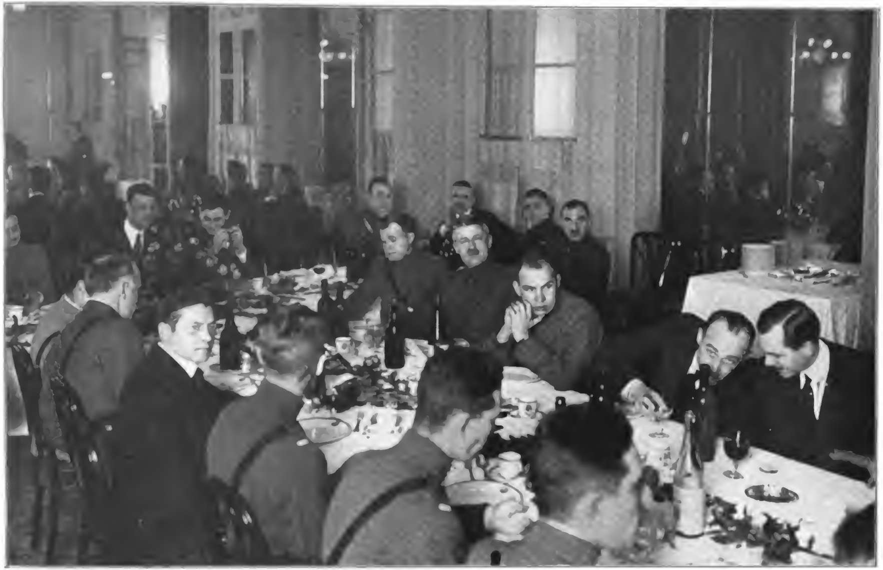
Goes with Professor Russell to Junior Plattsburg Camp to be director of technical training

Technology is to be well represented at the Junior Plattsburg Training Camp this summer. Besides Professor George E. Russell, '00, who will be president and general superintendent of the camp, there will be Professor Charles F. Park, '92, professor of Mechanism and director of the Mechanical Laboratories, who will have charge of the courses in Technical Training. Lieutenant-Colonel Donald M. McRae, a student at Technology up to 1915, will be commandant at the camp.

Professor Park was graduated at Technology in 1892 and since 1894 has been a member of the faculty here, becoming a professor in 1912. Professor Park founded and has directed for the last sixteen years the Lowell Institute school for Industrial Foremen. He is chairman of Summer Course at Technology, a Fellow of the American Academy of Arts and Sciences, and a member of the American Society of Mechanical Engineers. During the war Professor Park was a member of the Committee on Education for the S. A. T. C.

PROFESSOR SAUVEUR RETURNS

Professor Albert Sauveur, a former member of the department of Mining and Metallurgy given jointly by Harvard University and Technology, has returned from France where he had charge of the section of metallurgy in the technical division of the United States Air Service.



THE CHRISTMAS DINNER OF THE TECH BUREAU IN PARIS

Gibbs at the Head of the Table

TECH MEN OVERSEAS ENJOY CHRISTMAS

Pick Out Your Classmate — as He Looks in Paris

LANSINGH SPEAKS TO WOMEN'S WAR SERVICE AUXILIARY

Praises accomplishment of women

Van Rensselaer Lansingh, '98, formerly assistant director of the American University Union in Paris, told the story of his year abroad to an audience of about three hundred members of the Massachusetts Institute of Technology Women's War Service Auxiliary, Faculty and others interested in Technology in Huntington Hall, on the afternoon of April 24. He said that the city of Paris had answered the question of the future of the University Union by offering a large tract of land, centrally located, for the purpose of erecting a permanent American University club, to be the center of American university life in Paris.

The occasion of Mr. Lansingh's talk here was the closing of the Auxiliary workroom. Following his talk, a reception and tea was held at which samples of the work the women have been doing were shown.

The women who poured at the tea were Mrs. Joseph Lipka, Mrs. C. E. Locke, Mrs. A. D. Little and Mrs. H. M. Goodwin. The ushers at the lecture were Mrs. A. G. Robbins, Miss Evelyn Walker, Mrs. Bigelow and Mrs. Rollins.

Mr. Lansingh was introduced by Rev. Albert Lazenby, chairman of the War Service Committee of Technology. Mr. Lazenby paid tribute to the work of the Women's Auxiliary and thanked the women for their support. He said he would be willing to let Technology women handle any job he was connected with, in view of their splendid showing in war work. He said the Auxiliary was the greatest advertisement Technology has had. His acknowledgment of the work of Mrs. Cunningham in forming the Auxiliary was greeted with a round of applause.

Mr. Lansingh, too, was profuse in his praise of the Women's Auxiliary, saying that Technology has given more by its women than any other college.

Starting in to tell the story of his going to France, he said that the idea of the college abroad was conceived by a Yale man, Dr. Stokes. Mrs. Cunningham followed Dr. Stokes' lead and in June of 1917 arranged for the sending of Mr. Lansingh overseas.

Arriving in Paris, Mr. Lansingh founded the Technology Club of Paris, which was the first attempt of any college to establish a club in Paris. Because they were the first on the ground, Mr. Lansingh's party received a good deal of newspaper advertising, which he said was of great help to them. The club occupied seven rooms and furnished a real home for visitors, soon becoming, to use Mr. Lansingh's own words, " the center of American university life in Paris." In two months, men from thirty-five different colleges registered as guests at the club.

But to have every college maintain a club in France like Technology was doing would prove too expensive and as a result the colleges got together and formed the American University Union. At the start there were fourteen colleges in the Union. Now more than one hundred forty are contributing to the support of the project. In all, men from more than three hundred eighty-five American colleges have registered at the Union.

Mr. Lansingh said that the work was divided into two parts, first, the looking after college men, and second the educational part, that is the anticipation of a closer relationship between French, British and Italian universities and those of America.

The Union established quarters at the Royal Palace Hotel where the needs of university men in Paris were taken care of and entertainment was furnished them. College dinners were held there, and Technology was the first to hold one of these. Mr. Lansingh spoke of the friendly rivalry that existed constantly between Yale and Technology, each endeavoring to outdo the other in social service.

General Pershing was behind the Union from start to finish, Mr. Lansingh said, assigning a man to take up certain questions with the Union officials. The problem of liquor was one of these, and it was decided that light wine and beers should be served at the Union. Mr. Lansingh said that in his period of connection with the Union, he saw only one case of drunkenness there and that man had gotten his drink outside.

Mr. Lansingh said that the Union was unique in one respect, and that was when a man entered its door, his rank " dropped off him," and to see a colonel chatting with a private was a common sight. Mr. Lansingh said this was the only place in France where this was so.

With the establishment of the Union, college bureaus were maintained in different parts of the hotel to be centers for men of the several colleges. Mr. Lansingh acknowledged the assistance of F. B. Smith, '17, of Detroit, and of R. Allen, '16, and said that his own successor, Mr. George Gibbs, '00, formerly an Episcopal minister in Oklahoma, was " the most popular man in France."

Mr. Lansingh said the Minister of Education of France was interviewed and as a result the entire French educational system was placed at the disposal of the men at the Union. Now more than ten thousand men who have had at least two years' college training in America are studying at universities in Paris. In addition to this there are one hundred fifty thousand men studying at various post schools throughout France and there are ten thousand men at the University of Boune.

Following his lecture, Mr. Lansingh showed a few slides, pictures of the Union and pictures which he got while at the Verdun and Fort Dounamont fronts on engineering work.

ACADEMY OF ARTS ELECTS SEVEN INSTITUTE PROFESSORS

Seven Technology professors were elected fellows of the American Academy of Arts and Sciences at the annual meeting of that organization held last Wednesday evening in Boston. Twenty-five new fellows were elected in all, raising the total membership in the Academy to five hundred forty.

The Institute men elected were: Professor Joseph Lipka, Professor William S. Franklin, Professor Arthur A. Blanchard, Professor F. G. Keyes, Professor E. Mueller, Professor E. B. Spear and Professor A. G. Woodman. Marshals Joffre and Foch and President Poincare of France were made foreign honorary members of the academy.

Professor Charles R. Cross, formerly head of the Physics Department at the Institute read a report at the meeting, concerning the Rumford fund for physical researches, of which he is chairman.

CHANGES IN THE INSTITUTE CURRICULUM

First official announcement of the work of the Faculty's reconstruction committee

The profound changes brought about by the war have served in educational circles, as well as elsewhere, to focus attention on programs of reconstruction calculated to adapt our institutions to the changed conditions.

In many of our colleges and universities very radical changes have been deemed necessary in order that their educational programs may meet the world-wide demand for an education that will really fit young men and women to deal successfully with the complicated problems of the modern world.

The Institute, being a technical school, and always, in the nature of things, closely in touch with actual scientific and technical practice, has felt the need of radical changes less keenly than educational institutions of a different type, but it has by no means been idle in taking advantage of the reconstruction period to introduce changes intended to increase its efficiency and broaden and improve its general plan of education.

During the winter, a committee of the Faculty have been studying many of our educational problems and have embodied the results of these studies in a number of recommendations to the Faculty. In the main these recommendations are reflected in the new schedules for the various professional courses which have recently been adopted by the Faculty.

The first change that may be noted is that a new calendar has been adopted. Instead of two fifteen-week terms, there are to be two, the first of ten weeks running from October to Christmas, and a second of twenty weeks, beginning at the close of the Christmas holidays in January and running to June, with a break of a week's recess at the end of ten weeks. This arrangement will avoid the disadvantage of having a brief resumption of work after the Christmas recess only to be broken by the mid-year examinations and vacation, a time favorable for continuous and uninterrupted work.

Turning to the schedules themselves, it will be noted that trigonometry will hereafter be required for entrance, and will no longer be taught during the freshman year. This change will make it possible to begin the calculus at the opening of the freshman year, with a brief course in the fundamental principles and simple applications of the differential and integral calculus, thus starting this important subject as early as possible in the student's course. The more formal work in the calculus will come later in the first two periods of the second year, while in the third period, a course in mathematics, especially designed to train the students in the applications of the calculus to mechanics, will be given.

The entire work in mathematics at the Institute will aim, even more than in the past, to make it a thoroughly useful tool in engineering and scientific work.

In the past physics has been confined to the second year. Under the new program additional time will be devoted to the subject, and it will begin at the opening of the freshman year and continue through the second year. The increase of time has not been made with the idea of increasing the subject matter of the course, but for the purpose of devoting more time to what is given, and to make possible a more thorough and extended treatment of those principles and methods in physics which underlie all sound engineering practice. Physics is not only fundamental for any work of a scientific nature, but it is essentially a professional subject in an engineering school, and it is believed that it will be of advantage to engineering students to begin it as early as possible in the course. Beginning the subject in the first year will also avoid a break of an entire year or more between the preparatory school physics and that of the professional school. This also should prove an advantage.

Another change to be especially noted is that the work in English and history will be carried out together with a substantial increase in the time devoted to these subjects. Certain important periods in history, both foreign and American, will be studied, not by formal lectures and recitations, but by assigned reading in the literature of the periods under consideration, by informal oral discussion, and by written reports based on the reading and discussion. By such means it is felt that a greater and keener interest will be aroused for the study of history than by more formal methods of instruction, and that a clearer insight into the meaning and interpretation of history may be achieved. At the same time the power to use correct and effective English to express one's self will be more easily and quickly acquired by reason of having topics of real and compelling interest upon which to practice the art of expression. Work of this nature will naturally tend to broaden the student's outlook and focus his attention upon affairs of life outside of its purely professional side. With this same important aim in view, the amount of time devoted to political economy has been doubled and a substantial increase of time is assigned to elective general studies in the third and fourth years. A carefully chosen group of courses in literature, English and foreign history, business and economic subjects, and in general science, will be offered as electives and this list may be extended in the future.

For some time there has been a strong feeling among the alumni and Faculty that a greater amount of attention should be paid at the Institute to what may be called broadening and humanitarian studies in the belief that, however accomplished a man may become in technical or scientific lines, without an ample background in the so-called humanities, and without the ability to express himself clearly and effectively, his usefulness to society and his chance of attaining a full measure of success in his profession, or in life in general, is sure to be much lessened. It is in an effort to equip all Institute men with such a background, and prevent too narrow a training, that the changes in English, economics and general studies alluded to have been made.

Foreign languages will be no longer required in the first and second years, except in certain courses, such as chemical engineering, where a use of technical literature in foreign languages is a necessary part of the professional work.

A substantial reduction has been made in the number of hours of exercise as compared with hours allowed for preparation in nearly all of the professional courses. A large number of changes will also be made within certain professional subjects, with a view not only of improving their absolute value but in order to correlate them more closely with dependent work.

Provision has been made for admitting a junior freshman class in January of next year, as has been done this year and last. If this proves satisfactory it will be made a permanent policy.

Military training will be continued through the second year, for three hours a week, and provisions will be made in the schedules of several of the engineering courses for special work for men desiring to take advantage of the opportunity offered by the War Department for specially qualified and trained men to enter the engineering service of the army through the Reserve Officers' Training Corps.

FACULTY PROMOTIONS AND CHANGES

At the June meeting of the Corporation of the Institute of Technology the following were elected Term Members of the Corporation to serve for five years (until June, 1924):

Henry A. Morss, '93
James F. McElwain, '97
Merton L. Emerson,'04

The retiring members are Messrs. F. H. Fay, F. W. Hobbs, and Gerard Swope, whose terms expired in March, 1919.

The Corporation also voted upon the following promotions and changes in the instructing staff for the next school year:

To the grade of Professor:

Associate Professor C. W. Doten to Professor of Political Economy.

To the grade of Associate Professor:

Assistant Professor H. C. Bradley, '91, to Associate Professor of Drawing and Descriptive Geometry.

Assistant Professor F. E. Armstrong, to Associate Professor of Political Economy.

Assistant Professor C. E. Locke, '96, to Associate Professor of Mining and Ore Dressing.

Assistant Professor N. C. Page, '02, to Associate Professor of Electricity.

To the grade of Assistant Professor:

Instructor J. B. Babcock, '10, to Assistant Professor of Railroad Engineering.

Instructor S. A. Breed, '93, to Assistant Professor of Mechanical Drawing and Descriptive Geometry.

Instructor L. F. Hamilton, '17, to Assistant Professor of Analytical Chemistry.

Instructor H. B. Luther, '08, to Assistant Professor of Civil Engineering.

Instructor C. S. Robinson, '09, to Assistant Professor of Industrial Chemistry.

Instructor R. H. Smith, to Assistant Professor of Mechanical Engineering.

Instructor C. E. Turner, '17, to Assistant Professor of Biology and Public Health.

Instructor A. F. Holmes, '04, to Assistant Professor of Theoretical and Applied Mechanics.

To the grade of Instructor:

Assistant C. H. G. Gray to Instructor in Electrical Engineering.

Assistant F. C. Hoyt to Instructor in Physics.

Assistant Max Knobel to Instructor in Physics.

Assistant C. E. Lansil to Instructor in Electrical Engineering.

Assistant A. L. Russell to Instructor in Electrical Engineering.

Assistant C. E. Tucker to Instructor in Electrical Engineering.

Assistant E. E. Richardson to Instructor in Analytical Chemistry.

Assistant S. G. Simpson to Instructor in Analytical Chemistry.

Assistant P. O. Yeaton to Instructor in Mechanical Engineering.

APPLIED CHEMISTRY LABORATORY

The Department of Chemistry at the Institute probably had more professors in various kinds of war service than any other department, and during the war the teaching and laboratory staff was short-handed and overworked in consequence of the number of members of the faculty holding important posts both here and abroad.

With their return to duty, however, this spring, for the summer term, the chemical work, particularly the Laboratory of Research in Applied Chemistry, will reopen with its former strength. The Research Laboratory will again be under the direction of Professor, formerly Colonel, William H. Walker, Ph.D., who was Chief of the Gas Defence work at the Edgewood Arsenal in Washington, and whose labors made the American army the equal if not the superior of any European army in the problems of gas offence and defence by the time the armistice was signed. Professor Walker will be surrounded by an able group of research chemists, most of whom have seen important service along their specialized lines during the war. The staff of the laboratory is as follows:

William H. Walker, Ph.D., Director of the Laboratory and Professor of Chemical Engineering. He has been in the service of the War Department since the fall of 1917, but returned to the Institute on June 3.

Warren K. Lewis, Ph.D., '05, Professor of Chemical Engineering.

William H. McAdams, B.S., S.M., Assistant Professor of Chemical Engineering, beginning April 14, 1919.

Robert E. Wilson, Ph.B., S.B., Assistant Professor of Chemical Engineering and Assistant Director of the Research Laboratory of Applied Chemistry, beginning March 15, 1919.

Kenneth E. Bell, '17, Research Associate in Applied Chemistry, beginning June 2, 1919.

Everett W. Fuller, B.A., M.A., Research Associate in Applied Chemistry, beginning February 15, 1919.

William G. Horsch, S.B., M.S., Ph.D., Research Associate in Applied Chemistry, beginning April 1, 1919.

Leon W. Parsons, S.B., A.M., Ph.D., Research Associate in Applied Chemistry, beginning March 1, 1919.

William B. Ross, B.S., Research Associate in Applied Chemistry, beginning March 15, 1919.

Charles S. Venable, A.B., M.A., Ph.D., Research Associate in Applied Chemistry, beginning April 14, 1919.

Thomas M. Knowland, S.B., Research Assistant in Applied Chemistry, beginning March 1, 1919.

Stanley L. Chisholm, S. B., Half-time Research Assistant in Applied Chemistry, beginning May 15, 1919.

Merrill A. Youtz, A.B., Half-time Research Assistant in Applied Chemistry, beginning March 1, 1919.

APPOINTMENTS

R. R. Chamberlain, Instructor in Physics.
Thomas Derr, '19, II, Instructor in Physics.
Raymond Douglass, Instructor in Mathematics.
A. S. Hardy, Instructor in Physics.
Ralph Morris, Instructor in English.
Charles R. Park, Instructor in Theoretical Chemistry.
Dr. James S. Taylor, Instructor in Mathematics.
Bailey Townshend, '16, VII, Instructor in Physics.

Dr. Norbert Wiener, Instructor in Mathematics.

C. M. Wareham, '16, XI, Instructor in Inorganic Chemistry.

C. E. Turner, '17, Instructor in Public Health Administration in the School of Public Health.

Miss Charlotte S. Alling, Research Assistant in the Chemistry of Foods.

Miss Dorothy Bell, Librarian, Vail Library, beginning June 2.

Kenneth E. Bell, '17, X, Research Associate in Applied Chemistry, beginning June 2, 1919.

Stanley L. Chisholm, '17, V, Half-time Research Assistant in Applied Chemistry, beginning May 15, 1919.

T. E. Shea, '19, VI, Research Assistant in Electrical Engineering, beginning June 23, 1919.

RESIGNATIONS

Miss Helen Almy, Librarian, Vail Library, effective June 1.

A. F. Murray, '18, I, Research Assistant in Electrical Engineering, effective May 15, 1919.

A. A. Prior, Research Assistant in Electrical Engineering, effective May 24, 1919.

REAPPOINTMENTS

A. B. English, Instructor in Machine Tool Work.

D. A. Fales, '15, II, Instructor in Mechanical Engineering.

F. M. Gracey, Instructor in Freehand Drawing.

W. J. Hauser, '14, IV, Instructor in Mechanical Drawing and Descriptive Geometry.

M. P. Horowitz, '16, VII, Instructor in Biology.

Walter Humphreys, '97, Instructor in Mechanism.

C. N. Jacobs, '15, X, Instructor in Inorganic Chemistry.

A. S. Jenney, '83, Instructor in Architecture.

W. H. Jones, '09, II, VI, Instructor in Mechanical Engineering.

F. M. Kanaly, Instructor in Physical Training.

J. R. Lambirth, Instructor in Forging.

C. E. Littlefield, '95, Instructor in Chipping and Filing.

J. C. MacKinnon, '13, VI, Instructor in Physics.

J. F. O'Neill, '02, Instructor in Woodwork and Foundry Work.

R. G. Overland, Instructor in Mechanical Drawing and Descriptive Geometry.

N. S. Marston, '11, VI, Instructor in Electrical Engineering.

R. D. McIntire, '18, V, Instructor in Inorganic Chemistry.

H. H. Palmer, '09, Instructor in Physics.

Dean Peabody, Jr., '10, II, Instructor in Mechanical Engineering.

R. C. Reed, '04, Instructor in Mining Engineering and Metallurgy.

C. W. Ricker, '14, VI, Instructor in Electrical Engineering.

K. C. Robinson, '12, II, Instructor in Mechanical Engineering.

C. A. Rogers, '17, II, Instructor in Mechanical Engineering.

George Rutledge, Instructor in Mathematics.

F. H. Slack, Instructor in Public Health Laboratory Methods.

D. M. Taylor, '06, II, Instructor in Mechanical Engineering.

C. H. Walker, Instructor in the History of Ornament.

W. G. Whitman, '17, X, Instructor in Industrial Chemistry.
P. W. Norton, '08, IV, Part-time Instructor in Architectural Engineering.
Joseph Kaufman, '19, VI, A, Assistant in Electrical Engineering.
Miss I. D. Loring, Assistant in Architecture.
H. C. Priest, '19, VI, Assistant in Mechanical Engineering.
H. F. Reed, '18, II, Assistant in Mechanical Engineering.
James M. Strang, '19, VII, Assistant in Biology and Public Health.
D. S. Piston, Half-time Assistant in Physics.
C. K. Rathbone, Half-time Assistant in Drawing.
Miss Ruth M. Thomas, Research Associate in Organic Chemistry.
Charles R. Gow, Lecturer on Foundations.
Eliot Putnam, Lecturer on Architectural History.
Dean Peabody, Jr., '10, II, Lecturer on Reinforced Concrete.
F. L. Schaub, Lecturer on Business Law.
Arthur C. Melcher, '00, Purchasing Agent of the Chemical Department.
Elof Benson, Curator of Apparatus and Assistant in Physics.
Carl Selig, Constructor of Apparatus and Assistant in Physics.
Ralph G. Adams, '11, II, Instructor in Mechanical Engineering.
W. P. Blood, Instructor in English.
Francis R. Brown, Instructor in Forging.
R. G. Burnham, '00, Instructor in Mechanical Engineering.
Evers Burtner, '15, XIII, Instructor in Marine Engineering.
C. H. Clark, Instructor in Mechanical Engineering.
M. R. Copithorne, Instructor in English.
I. H. Cowdrey, '05, Instructor in Mechanical Engineering.
W. A. Crosby, '17, IV, Instructor in English.
Myron W. Dole, '04, Instructor in Mechanical Engineering.
J. J. Eames, '02, Instructor in Mechanical Engineering.
W. C. Eberhard, '14, I, Instructor in Mechanical Drawing and Descriptive Geometry.

APPOINTED FOR TWO YEARS LAST YEAR

To continue this year

W. R. Barss, Instructor in Physics.
F. L. Hewitt, Instructor in English.
F. R. Kneeland, Instructor in Organic Chemistry.
C. H. R. Mabie, Instructor in Mechanical Drawing and Descriptive Geometry.
Winward Prescott, Instructor in English.
Penfield Roberts, Instructor in English.

WANT COURSE IN AERO ENGINEERING

A petition for the purpose of establishing at Technology a complete undergraduate course in Aeronautical Engineering has been circulated among the students, and presented to the faculty. Considerable enthusiasm was apparent among the twenty-odd men who were present at a special meeting. It has the backing of Dean Alfred E. Burton and Professor Parks of the faculty.

FIVE YEARS OF TECH SHOW

At the Tech Show dinner held this June after the successful performances of "A Doubtful Medium" I said to the boys, in substance, this: "The Tech Show has now proved itself, proved itself valuable for its own sake. For a long time it was looked upon too much, perhaps, as a means of making money for the Technology athletics, and as a means tolerated by those, alumni and instructors, who saw no good in it for its own sake. But today athletics does not need the Tech Show's money. It can get along perfectly well with its share of the student tax. The fact that the Show could send a thousand dollars last year to the American University Union shows that conclusively. Furthermore the standard of accomplishment of the Show for the past few years has made it valuable as an end in itself, as a vital thing in the training of those men who go out for it. Henceforth the energy should be put, not into making money, but in making the Show the best in America."

I wish to amplify this a little for the alumni.

I have seen five Tech Shows, been fairly closely connected with them, seen them develop from the protozoa of incomplete scenarios, through the tadpole stage of hectic dress rehearsals to the complete vertebrates of the alumni performance. My biology may be wrong but my memory is right. And I have seen in the last five years a continuous increase in intelligent experimentation, in better ideals and in professional standards. The old Tech Show was like the old college show everywhere, a pretty unintelligent and flat imitation of old-style musical comedy. But while other college organizations of the sort, such as the Pudding and the Pi Eta at Harvard, for instance, have been sticking pretty closely to the same old thing, the Tech Show has been quick to catch on to the new type of quiet, well-bred, "intimate" musical play, for which some unusually well-fitted talent was found at the Institute. The first urge towards novelty came with "M 34" in 1916, which, although not entirely successful in some of its working out, was animated by a good idea, that of a "revue," and was notable for costumes and scenery, designed and made by the students, which set a new standard of beauty for the Show. There, for the first time, we saw Joe Gardner and Johnny Coldwell, in the ballet which was to be Technology's one great contribution to undergraduate musical comedy.

The next Show, "Not a Chance," in 1917 saw dancing that I have never seen bettered on a professional stage; Miss Virginia Tanner's elaborate oriental ballet of the Dawn, with Gardner, now a captain overseas, as the Mordkin of the piece, and one or two as unusual solo pieces also by Gardner. The production was too heavy and too expensive, too many scenes and too elaborate, but those who remember the Chinese wall set, the rose-window drop in the new manner for Gardner's "pas seul," or the last scene, will acknowledge the ability of Tech's scene designers.

Last year, 1918, in "Let 'Er Go!" saw an old favorite in a new role, Walt Frazier in his impersonation, "Vamping on the Great White Way," as poised, richly humorous yet reticent, and polished an impersonation as you could see on any professional stage. Frazier repeated his success this year in a similar impersonation, "Oh, what a life while it lasted!"—if anything, funnier. And both years his power for that sort of impersonation was set off by the extraordinary sweetness and charm—those are the only words for it—of little Freddy Britton in his ingenue roles.

But what makes or mars a musical piece is the music, and in that we have had in five years two men with unusual ability as music writers, one, Earl Collins, who seems born under the Jazz star, and Bill Hedlund, whose solid musical training in the classics has enabled him to write music, particularly orchestral music, far above the usual thing in college shows.

Now I have been speaking, not of those things that were merely good, clever, pleasant, but of those features of the past Tech Shows which have been absolutely first class judged by whatever standard you please, and which show what good work engineers can do in the difficult and unfamiliar field of Art. For these things WERE Art—Art with a capital A—within my experience unequalled, and I have had to do with a good many undergraduate theatricals in a good many schools. The scenery and costumes of 1916 and 1917, the Dawn ballet and the Primitive ballet of 1917 and 1919, the music, written and played, of all the last four years, the character impersonations of Frazier, the unaffected appeal of Britton's acting, and finally, and not least, the complex, articulated competence of the business management—these are not to be beaten anywhere and should, if their real value is properly seen, "clinch the precedent," as Prexy Eliot once said, for Tech Show.

I have written before in this magazine of the unequalled value for college men, even in a place like Tech, of "organized and productive leisure." That is what a good activity should give. That is what Tech Show gives better, and for a larger number of men, than any other one Institute activity. It employs over a hundred men, more than any except athletics. It gives them a chance to specialize in a dozen different ways, in writing, both lines and music, acting, playing in the orchestra, scene designing and painting, lighting, stage managing, ad getting, program publishing, publicity, accounting and bookkeeping, and finally—at the top of the list—executive management of a very advanced sort. And all these men are urged and made effective by the thought that they are doing something solid and concrete, a work of art— whether they think of it in that way or not—which will have to be judged by large and critical audiences and will have to face the comparison not only with other college shows, but with professional productions.

The result is that the hundred men who have used their leisure in this way have gotten something out of it which will be of value in the outside world. They have mixed and worked and fought and compromised and accomplished with other men; they have had a taste of what it means to put through something big and actual; they have learned something about production engineering. And that training, if I were those men, I would not exchange for any number of credit marks gained by unremitting and solitary study.

But the value of it goes deeper than that. My last paragraph applies largely to the business force, to the technical end of the Show. What of the actors, the playwrights, the musicians, the dancers? This! Long ago, as G. K. Chesterton tells us, everybody sang in a chorus. Nobody did it well, but all did it. Today the crowd sits still and listens to the expert sing, because he alone can do it supremely well. The next step, he thinks, would be to have our noses blown for us by experts. In other words, between the business man or engineer and the artist there is a great gulf fixed, the gulf of professionalism. The engineer despises the professional artist, as a result, the writer, the singer, the actor, painter, entertainer—and the artist has no words at his command to express what he feels about the engineer. The result is the present state of our literature, art, stage and music—in short, of our civilization. For these things are the essence of civilization.

Now any man who has written, acted, danced or sung in Tech Show has, in ever so little a way, bridged that gulf, and helped take the curse off Art—as the engineer thinks of it. He has learned to do something he never knew how to do before, a difficult, a subtle, a taxing thing, and has learned that when he can do it well enough people enjoy it and respect him for it. If you do not believe it, ask any man, any average Course II man, who has been seduced into going out for the Masque of Power in 1916, the Dawn Ballet in 1917 or the ballet of this year, and has been trained by Miss Tanner to do genuine, difficult, athletic ballet dancing, and who made one among the many in those three splendid spectacles. He will back up what I say. And any one who saw either of those three visions of beauty and strength and art, either on the stage or in the Great Court on that June night three years ago, will, I think, upon reflection agree with me.

Now that is the lasting contribution of Tech Show to the lives of those men who take part in it. To one group it gives a training in the careful and proper management of great enterprise; to the other group it gives that far more important thing, some sense that art and literature and drama and music can be made part of the life of the average business man, are not isolated professional things, and in a decent civilization would not be isolated, professional things. In other words, the Tech Show gives them IN ACTION the worth of a dozen courses in the fine arts, music and aesthetics in general. It is a pragmatic liberal education. It is the only place in the Institute where most of them get that liberal education, outside of Course IV. And it is only too often the only thing in all their lives that gives them a sense of what aesthetics is and its place in our daily lives.

And that is why, student tax or no student tax, profit or no profit, the Tech Show has made a permanent place of necessity for itself in the unofficial curriculum of the Institute and deserves all the encouragement and hard work that can be given it. For the last five years of achievement have made it not a means but an end.

R. E. R.

THE FUTURE OF GAS

As pointed out by Colonel William H. Walker, who is better known as the Director of the Course in Chemical Engineering at the Massachusetts Institute of Technology, gas warfare is effective, largely because the troops that are subjected to continued exposure to gas and, therefore, have to wear their masks for several hours, lose a great deal of their efficiency, even to the extent of rendering it necessary to remove them from the gassed areas. It was the heavy gassing of the back areas, and particularly of the reserve troops back of the British front lines, resulting in loss of efficiency among those troops due to their having to wear gas masks, that contributed so largely to the German success in the great drive of March, 1918. And the slowing up of that offensive and its ultimate loss of driving power were due largely to the fact that the Germans ran out of gas.

If these facts are well established, and they rest upon the highest authority, it becomes a question whether prudence and farsightedness do not suggest the maintenance of our great gas factory at Edgewood Arsenal as a permanent military asset of the country. If a small force, sufficient to care for the plant, were maintained there, we should have at hand, capable of immediate operation, a military asset far exceeding in its potentialities anything of the kind in the world today.

THE FINANCIAL ADMINISTRATION OF EDUCATION

The real position of college trustees in regard to their institutions

We reprint from a recent issue of "School and Society" an article by Professor L. M. Passano of the Institute, a very timely article in view of the present financial position of Technology, and one which should interest both those alumni who are serving on the Corporation and all others who have at heart the permanent interests of the school.—Ed.

Amid the accumulation of criticism, suggestion and complaint in reports of investigations of the productive department of the educational establishment, it is perhaps timely to search for a few facts and to raise a few questions about the administrative branch. In other words, when the productive workman of the college, the teacher, is accused of inefficiency or failure along all the lines of his work — admission to college, time schedules, content of courses, testing and grading of students, aims and ideals in education — it may be well to ask whether the administrative, the financial officers of the college are so conducting their department as to be absolved from criticism or reproof.

With possibly a few exceptions the American college is notoriously poor, penurious, and is being operated with insufficient capital and funds. This condition of affairs is in no way the fault of the workmen — teachers and students. The former work for low wages and the latter pay a high apprenticeship fee. Nor, in any case, is the workman supposed to be directly concerned in the financial management of an establishment. The trustees or regents are the financial managers of the college and their first concern, unless they are mere dummy directors, should be to provide ample capitalization — without water — and sufficient working funds. The financial head of a business does not merely provide for the proper expenditure of what capital there is, but has the far more important duty of providing the working capital that is necessary to the proper conduct of the business.

The workman, the teacher, is notoriously underpaid. To be a successful accumulator of wealth no education beyond that of the grammar school would seem to be essential. To be a successful college teacher there is needed in addition four years of high school and six or eight years of college and university training; in all ten to twelve years of special training for an occupation which pays a man at thirty years of age, on the average, a salary of twelve hundred dollars per annum. And, it must be borne in mind, during this period of training the prospective worker, the teacher, pays into the college a sum of, say, one thousand to twelve hundred dollars; an investment on which the interest is certainly not compounded. Truly the financial embarrassment of the colleges cannot be attributed to the high wage paid the workman.

It may be objected that the directors of the educational corporation are not paid, and that like the directors of any — or any other — charitable, non-productive institution their responsibility rests entirely in administering the funds of the institution and in no way is concerned in the provision of funds or capital. Both of these statements are open to denial. The trustees of the educational corporation

— whether private or state endowed — are paid, not in money, indeed, but in social prestige and honor; and indirectly in economic values. The positions they hold enhance their standing in the community, bring them into the eyes of the public and increase the number of their opportunities to hold fiduciary positions which do pay directly and economically. The educational trusteeship, whether for a lawyer, a banker or a capitalist, is a business advertisement; the only kind of advertisement often that professional etiquette allows them to have. Moreover there are instances in which trustees endeavor to make their positions of more direct economic value. For cases are known in which, it is said, the trustees have endeavored to force the teaching of economic doctrine directly favorable to their private business investments, and to suppress the teaching of doctrine, sincerely believed to be conducive to the welfare of the community as a whole or of large classes of the community whose interests are supposedly in opposition to those of the class to which the trustees belong.

In the second place, in spite of assertions to the contrary, neither the educational institution itself nor any institution concerned in bettering the lot of the teacher, is in any sense a charitable institution; and, moreover, the educational institution is productive in the highest sense. The teacher is paid for valuable and strenuous labor in producing a " commodity " of supreme importance, not only to the young man or woman being educated, but also to the community of which they are to become citizens. This being so it is the duty — a duty for which they are compensated — the *duty* of the trustees to provide ample funds and capital for the productive enterprise whose finances are entrusted to their care.

The trustees of the educational corporation have been derelict in their duty of providing capital and working funds, unwise in the expenditure of funds provided, deficient in judgment in making contracts, and unfair in the treatment of the workman of the trade. The first of these four assertions needs no proof. Most of the educational institutions of the country are embarrassed, some are desperately poor, and some on the verge of bankruptcy.

The second assertion is not so obviously or generally true, but is supported by this evidence: The educational institutions, for the most part, are competing for numbers. Growth in the number of students and ability to hold the number in spite of adverse conditions are the criteria used in judging of the success of an enterprise which, in any case, is run at a loss, and in which increase of product is said to be accompanied by increase in deficit. The management of a commercial enterprise under such conditions would concentrate its attention and effort upon a reduced product of higher value; upon quality of product, not quantity. The workmen — the teachers — of the college are, in general, opposed to this policy of numbers. They prefer a high-grade product in smaller quantity, rather than a large quantity of low-grade goods. This preference is partly due to selfish motives, because there is more pleasure in producing a thing of high value and of perfection, and to do so requires not less but more skillful and interesting labor. The teacher recognizes also that the high-grade product is much more valuable to the community. In this the motive is unselfish.

In this connection it would be interesting to compare the increase of administrative salaries and wages with the increase of productive salaries and wages in educational institutions throughout the United States. The following approximate figures are available for a typical institution.

Increase in total annual expenditure, wages and salaries, for teaching (not including research and special lectures) about two per cent.

Ditto, including research and lectures, seven per cent.

Increase in average annual salary (not including research and lectures) seventeen per cent.

Ditto, including research and lectures, twenty-five per cent.

Increase in total annual administrative wages and salaries, including wages accessory to teaching, fifty-two per cent.

Ditto, not including wages accessory to teaching, twenty-nine per cent.*

The second assertion (unwisdom in expenditure) is supported also by the methods and results of a corporation founded for the advancement of teaching. The Carnegie Foundation is — or was — in no sense a charitable organization. Its system of retiring allowances and pensions was a deferred payment of wages earned by severe and arduous labor. This corporation has been so managed as to be compelled, it says, to abrogate its moral contracts by the substitution of legal contracts of an entirely different nature. Instead of pensions as a deferred payment of wages earned are substituted life insurance and annuities to be compulsorily paid for out of wages already too meager for decent living. The reason for the change is that the corporation which assumed the moral contracts has become, or was about to become, bankrupt. The corporation has apparently more than sufficient funds to fulfill its existing obligations, but instead of so doing it repudiates them, partially or wholly, and asks the holders of the repudiated contracts to trust it — the corporation — under a new name to fulfill a new species of contract in the making of which the holder has no voice or choice, and in a company in whose management the holder has no share. In the meantime the funds of the semi-bankrupt corporation have been used, in part, in paying for the collection of futile data and the publication of useless reports on the productive department of the educational institution. A commercial corporation under such conditions would be compelled by law to liquidate its existing obligations before undertaking new ones, and the management and methods of the old company would be closely scrutinized before its directors were permitted to float its new certificates. Moreover, the worst feature of the proposed new company and its contracts is the insidious evil underlying them. If they should be universally or generally accepted the Carnegie Foundation would get control, almost absolute, of the entire system of higher education in the United States and Canada. It is commonly believed that the foundation has always had this aim, and it is seen that the new insurance and annuity company is a powerful and insidious means of attaining it. But the world at present has lost all trust in despotisms, however benevolent.

The foregoing remarks support, also, the third assertion made above, that the trustees of the educational corporation have been deficient in judgment in making contracts. This assertion is also supported by the present condition of a number of educational institutions as a result of the cancellation of contracts made with the federal government in connection with the Students' Army and Navy Training Corps. Many corporations entered into contracts with the government for war-time production. Those which were wisely managed made arrangements at the same time for a return to peace-time production. The sudden return of peace conditions left a number of educational institutions helpless derelicts upon financial waters, and left all educational institutions in a state of fear and panic. The criticism that would be made of a commercial enterprise so mismanaged could be equally well applied to the educational enterprise.

Some instances in support of the fourth assertion, that the treatment of the worker in the educational institution has been unfair, have already been adduced.

* Expenditures for operation and maintenance of plant are not included in the above figures.

There are others. Wages in all occupations have greatly advanced. Wages of teachers have remained almost, and in some cases, entirely stationary. There has been much overtime work in all occupations, and overtime has been paid for as time-and-a-half or double time. An enormous amount of overtime work in teaching has been done, for the most part without pay and never, as far as any information is available, at advanced rates. Cases are known of pay for extra time at less than the current rates but never a case, it may be asserted, of double pay or time and a half.

In this matter, however, the teacher does not stand upon his rights. For many reasons — patriotism, pride in his profession — he is willing to forego what other wage earners demand as a right, but he is justified in counter-criticizing the financial management of an institution which permits such conditions to exist. He knows, of course, that the trustees can expend only the funds which they have, but he asserts that it is part of the duty of the financial management to supply the needed funds. He, the teacher, knows also that such funds must be supplied ultimately by the whole community, by the people as a whole. Even if the funds are a direct gift from those able to give because of superabundant accumulation of wealth, it is the community in the end which is the donor, because it is the community as a whole which has given the wealth to the individual, sometimes with, sometimes without an adequate reciprocal service. Or it may be that the community contributes in the form of government appropriations which the whole community pays in the form of taxes. If the "federal government was willing to spend two hundred million dollars in one year on education . . . because the national need was great" in time of war, there is no reason why the state and federal governments — that is, the whole American people — should not spend double that amount in time of peace when the national need is greater; when the need is not so immediate and imperative, perhaps, but is more important and enduring.

The financial management of the educational corporation should learn, then, first of all, the real importance of education to the individual and to the community. It should, in the second place, understand that it is the duty of the management to convince the public of this importance; should see to it that the public understand that it is being offered the very best investment for its money. Finally, the directors should clearly see that the first duty of the management is not so much the wise expenditure, as the liberal provision of funds. The workman of the educational factory will do the work cheerfully and willingly, but he has a right to expect that those in charge should see to it that the enterprise is properly financed. Let this be done, hold in abeyance captious criticism of the workman, and give him a chance to show what he can accomplish with adequate pay under favorable working conditions.

Leonard M. Passano.

DEAN BURTON'S SON RETURNS WITH A BELGIAN DECORATION

Harold H. Burton, son of the Dean, has arrived from overseas. He was a captain in the 361st Infantry, a part of the 91st, the "Wild West" Division. He took part in the fighting in the Argonne region, and is a winner of the Belgian Croix de Guerre. Captain F. Arnold Burton, '00, Course IV, the Dean's other son, is now military attache at the Hague, and is expected to return shortly.

IS THE INSTITUTE ON THE DEFENSIVE?

Are our methods out-dated? The Carnegie Foundation awards the palm to the University of Cincinnati—the co-operative system of engineering education

From the Cincinnati Enquirer

Co-operative system of education for engineering students as originated and established in the University of Cincinnati by Herman Schneider, Dean of the Engineering College, has been declared the best of all systems in America by the Carnegie Foundation for the advancement of teaching.

More than three years ago the leading engineering societies of America requested the Carnegie Foundation to appoint a man trained in applied science, who would be able to give his entire attention to the investigation of the engineering colleges in America. The foundation agreed to appoint such a man and bear the expense of the study.

Professor Charles R. Mann, of the University of Chicago, undertook the work, and the results of his investigation have just been published by the Carnegie Foundation.

At the same time the British government sent Dr. Herbert Branston Gray, cousin of Sir Edward Gray, and secretary to the Royal Commission on Taxation, British Columbia, as a representative of the British government, to study the co-operative plan at the University of Cincinnati, with the view of establishing such a system in England.

Dean Schneider came to the University of Cincinnati from Lehigh University in 1903. At that time the University of Cincinnati had a small engineering college. In 1906 Dean Schneider inaugurated the co-operative plan of education.

This plan permits the students taking the engineering course to attend college two weeks and then work in the shops for two weeks. By this method the student is able to earn enough money to pay in large part his way through college, and at the same time receive practical engineering experience.

When Dean Schneider adopted this plan of education he was criticized by the leading educators of the country. He was termed a "faddist in the educational world."

The educators even went so far as to predict the failure of Dean Schneider's revolutionary measures in education.

Now, approximately ten other universities throughout America, besides a large number of preparatory and high schools, have adopted the Schneider method of education. It has been due largely to the co-operative system that the University of Cincinnati is known throughout the world.

The report of the investigation says that Dr. Mann took twenty of the leading engineering schools of the United States as good examples of the educational system relative to engineering in America. The colleges were the following:

The United States Military Academy, Rensselaer Polytechnic Institute, Massachusetts Institute of Technology, Stevens Institute, Carnegie Institute of Technology, Columbia University, Tufts College, Worcester Polytechnic Institute, Virginia Polytechnic Institute, Purdue University, Pennsylvania State College, Cornell University, Sheffield Scientific Institute, University of Pennsylvania, University of Virginia, University of Pittsburg, University of Illinois, University of Wisconsin, Ohio State University and University of Cincinnati.

Dr. Mann, in his report to the Carnegie Foundation, gives a short description of Dean Schneider's co-operative plan. He says:

"The Cincinnati plan was first formulated by Dean Schneider in 1899, when he was instructor in civil engineering at Lehigh University. In 1902 Dean Schneider presented a full statement of his scheme to the directors of several large industrial institutions which were considering the establishment at Pittsburg of a new technical school.

"This plan was to give an engineering training that would be better suited to industrial needs than that given in the engineering colleges. This plan was abandoned when Mr. Carnegie founded the Carnegie Institute of Technology in the city of Pittsburg.

"Finally, in 1906, Dean Schneider found an opportunity to make his experiment at the University of Cincinnati."

A description of the work and the working plan of the Engineering College, University of Cincinnati, is taken up in detail by Professor Mann.

"The curriculum is complete in five years of eleven months each, so that the student receives twenty-seven months of university instruction and twenty-seven months of industrial work," Professor Mann says. "The graduates of Cincinnati have unquestionably as extensive training in theory as those of other first-class schools.

"In addition the Cincinnati graduates are able to command positions as graduates without one or two year 'apprentice' courses such as are required of men from other schools by a number of large corporations.

"Approximately one hundred of the industrial firms of Cincinnati and vicinity now are co-operating with the university in this work. These firms represent every important phase of engineering, so that the university is able to arrange the work schedules in such manner that each student progresses regularly through every phase of his specialty.

"Financially, the co-operative plan is economical, both for the university and for its students. The university has access, without expense, to shops and shop equipment that are worth millions of dollars, and are never allowed to deteriorate or become antiquated."

The financial advantages of the "Schneider plan" also are set forth by Professor Mann. The Carnegie Foundation also reports that the co-operative plan is much better than to have the shops in the college without access to the industrial plants.

Dr. Mann speaks of the educational advantages of the Cincinnati co-operative course at such small cost. He says:

"With such rich opportunities for education lying plentifully about in industrial plants, it is a striking anomaly that the schools make so little use of them. The situation is all the more impressive because the co-operative use of industrial plants results in a large reduction in the cost of schooling and gives the student a chance to support himself partially in college."

Professor Mann, speaking of the internal workings relative to the faculty, said:

"If the Cincinnati plan has proved stimulating to the students, it has been revolutionary for the faculty.

"The co-operative type preserves one of the main advantages of the military type in that its jurisdiction extends within the departmental boundaries. Since it uses this jurisdiction not for autocratic control, but means of converting government by the majority vote into a community of effort for the students' good, it also possesses another of the effective factors of the military type, namely, homegeneity of action.

"When skillfully organized, as at Cincinnati, the engineering faculty is a co-ordinating center for the entire engineering curriculum. Nor does it appear to have lost any of its nominal advantages of the autonomous-department type in the way of personal freedom of its members and inspiration for creative work."

In most of the colleges of the country departmental autonomy is in vogue. In fact, the Liberal Arts College of the University of Cincinnati still operates under this plan.

The autonomy plan gives the head of each department complete charge of arranging all courses and power to tell what every class should study in his department.

Dean Schneider abolished this in the engineering college as soon as he was appointed dean. In the engineering college at the university the faculty meets every week and decides as a body just what each department shall teach.

The critics in years past of Dean Schneider's plan are recalled also in Professor Mann's report. He tells how the educators scoffed at the plan. He says:

"Because the educational conceptions on which the Cincinnati plan is founded are so different from the currently accepted conceptions of school practice it has taken some time for other schools to recognize the significance of the venture.

"The scheme was scoffed at as unworthy of a real university and more likely to produce 'skilled boiler makers' than real professional engineers. At the present time other colleges are instituting similar organizations."

In concluding his report on the University of Cincinnati Engineering College, Professor Mann says:

"The co-operative system at the University of Cincinnati is the most complete and thoroughgoing solution of this problem yet presented.

"Recently Dean Schneider has been able to express this fundamental educational conception of the co-operative educational system in a manner that is easily comprehensible to university men. Several of the industrial firms co-operating with the university are supporting industrial research laboratories for the purpose of increasing production.

"These laboratories are treated by the university exactly like other sections of an industrial plant; so that upper classmen, who have shown ability in investigation by the way in which they have discovered and defined problems in industry during their earlier years in shop experience, are assigned here as assistants on research problems for their regular bi-weekly tasks."

At the same time as the Carnegie Foundation published its report Dr. Gray, of the British government, published an account of his visit to America. In this account Dr. Gray characterizes Dean Schneider as "the far-sighted genius."

The British government emphasized the fact that Dr. Gray's trip to America was to study the educational system and especially the co-operative system as established by Dean Schneider. The British government is contemplating copying the Schneider plan in Empire schools. Dr. Gray in his report says:

"By far the most potent and scientific factor in linking up the interests of the school or college and factory, as well as the most hopeful in obtaining the future industrial prosperity of the American nation, is to be found in the part-time labor system, which owes its birth to the far-sighted genius of Dean Schneider of Cincinnati."

Dr. Gray says that the co-operative system of education is the only way that Great Britain will be able to solve her education problem of keeping the children in school.

"The Cincinnati system is the most potent factor in linking up of collegiate and industrial life, because it meets squarely the basic problems of industrial community," Dr. Gray continues.

"It is the most scientific factor because it is continually adjusting general principles to the needs of industry. It is readjusting practical shop and factory experience by appeals to the domain of scientific law, and that, not in the casual or irregular way, or at long intervals of time, but by fortnightly movements of the students to and fro between theory and practice."

The engineering colleges are beginning to grasp the real educational significance of the co-operative shop work, and industrial laboratories at universities will surely be forthcoming as soon as the conception of their national scientific and industrial importance is clearly defined. A combination of the two undoubtedly supplies the ultimate solution of the problem of shopwork in engineering education.

TECHNOLOGY AIR SERVICE CLUB IS ORGANIZED

Fliers meet at Hotel Lenox for election of officers

The service was well represented at the first banquet of Technology air service men. Fourteen former pilots, observers and balloonists of the army, navy and Marine Corps were present, men who had helped win the war in the United States and abroad, and several of whom have one or more German planes to their credit. Aside from the immediate object of bringing together members of the Institute who have the common interest of service in the air forces during the war, the banquet was held to consider the entry of a Technology team in the aero meet to be held at Atlantic City in May.

After dinner Paul Sheeline, '19, described the events to be held at the meet and read letters he had received regarding Technology's participation. The prospects of getting planes or balloons were discussed informally. Assistance is expected from the airplane manufacturers, as the Atlantic City meet is the first large meet to be held in this country by other than professional fliers, and the extensive use of aircraft for sport purposes is not assured as yet. It is believed that the support of the Technology Alumni Advisory Committee on Athletics may be counted on.

It was decided to organize and elect temporary officers, in spite of the absence of a large proportion of the fliers at the Institute. The following men were chosen: President, Sheeline; vice-president, Guy Davis; secretary-treasurer, Edward Van Dusen.

The Technology Air Service Club is open to all students at the Institute who have flown in planes, dirigibles, or balloons. Those desiring to join are requested to leave their names in the Information Office. Dues will be a nominal amount and all fliers are urged to join.

PRATT BEQUEST CONTESTED

Pratt heirs assert conditions of $750,000 bequest not fulfilled

QUESTION of the forfeiture of a trust fund of approximately $1,000,000, now in the possession of the Massachusetts Institute of Technology, was raised before Judge DeCourcey in the Supreme Court when heirs of Charles H. Pratt opposed a petition of the Institute to sell certain real estate for the purpose of changing investments.

Mr. Pratt, a Boston attorney, died May 7, 1912. It was his desire, as expressed in his will, that his estate be held in trust for twenty-one years, unless before that time a fund of $750,000 should accumulate. In that event he provided that the money was to be used " forthwith " for the establishment of the Pratt School for Naval Architecture and Marine Engineering, as a memorial to his parents and other members of his family.

The heirs now maintain that the Institute lost the right to the fund when it did not begin building after it had come into possession of the fund. They assert that by the Institute's alleged failure to build " forthwith " — that word being written in Mr. Pratt's will — they are entitled to share in the distribution of the fund, but should the court rule to the contrary, they declare they had the right to share all in excess of $750,000.

The Institute denies that there was unreasonable delay in complying with Mr. Pratt's wishes. It asserts that financial conditions brought about by the war, including the increased cost of materials and labor and restrictions placed on building activities by the war industries board, virtually prohibited the building of the school. Also, according to President Maclaurin, the awakened interest in shipbuilding and the rapid changes that were being made in that business, necessitated a thorough study of the program of courses to be given.

The Institute also claims that it is entitled, under the residuary clause, to the sum in excess of $750,000.

After Judge DeCourcey had heard evidence to settle certain facts involved, he announced that he would report the case to the full bench of the Supreme Court for final determination.

Inventory of Mr. Pratt's estate, filed October 9, 1912, showed $243,805.49 personal and $455,199.96 real.

Seven cousins of Mr. Pratt contested the will, and the Institute trustees did not come into possession of his property until 1915, when an inventory showed an estate of $816,987.69.

On October 4, 1916, the trustees turned over to the Institute $935,000. As Mrs. Fannie B. Pratt, mother of the testator, had a life interest in some of the estate, the Institute extinguished her rights under an agreement made to pay her $10,000 a year during life.

A full account of the history of the Pratt bequest may be found in the REVIEW of January, 1918.

THE SYMBOL IN TECHNOLOGY

A letter for the Committee on the War Memorial

To the Editor of the Technology Review:

Dear Sir: The Technology Review requests suggestions in regard to a Technology War Memorial.

The modern tendency is to erect " memorials " of a useful order such as, for instance, as applied to Technology, a gymnasium or a boathouse. This type of memorial satisfies the physical rather than the spiritual needs. I imagine that the general demand from the graduates will be for this sort of a memorial, but I would like to speak in favor of something more abstract and symbolic, something that would minister to the spirit and stimulate the ideals of the students. A gymnasium or boathouse or whatever was built would include a bronze tablet stating that the building was erected as a memorial for those who died in the war, but it would be used by the students as a gymnasium or boathouse and chiefly regarded as such. The usefulness and advantages of such buildings are self-evident, while the usefulness of high ideals and the power of spiritual forces are not self-evident; they are, however, at least of equal if not of greater importance. The world of today and the student of science in particular is so absorbed in physical phenomena that it is easy to lose sight of the spiritual forces that also have a part in life. Victor Hugo said, " The future belongs to Voltaire; not to Krupp," and the war seems to have fulfilled his prophecy. The power of the spirit behind the slogan," Ils ne passeront pas," was greater at Verdun than the power of the wonderful German war material.

It seems to me that the memorial is a splendid opportunity to put a symbol into the midst of the new Technology.

I would have this symbol in the form of a statue of heroic size, perhaps thirty feet or more in height, and of the same general order as the Statue of Liberty; this to represent the spirit of liberty, democracy and high ideals of culture. In addition to the main figure I would have two smaller ones representing the typical soldier and sailor of 1918. The war showed to us our type, which the French cartoonists were so quick to grasp when our soldiers appeared over there. Youthful looking, alert, keen, athletic, clean shaven; the type should be immortalized in bronze.

If such a memorial were planned, endless money, time and exertion should be expended in order to discover and to engage the most capable artist to do the work. An ancient sage has said, " Wisdom cometh from the opportunity of leisure," and accordingly the artist should be given every encouragement to create in the most favorable atmosphere and not be harried and hurried in order to have the work ready for any fixed occasion. Technology has won many honors in the past in other fields; nothing could bring greater honor and glory to the Institute in the future than to have been the means of the creation of a noble and lasting work of art.

Very truly yours;

(Signed) A. G. Kellogg, '09.

M. I. T. HAD BIG SHARE IN TRANS-ATLANTIC FLIGHT

Navy found aviation school in operation when war needs came—Hunsaker, who built NC's, a graduate of Tech

The part which the Massachusetts Institute of Technology has played in the development of the science of aviation the past half-dozen years, and the relation which this work bears to the trans-Atlantic flights made by the United States Navy, is not generally known. But it is safe to say that but for the wise foresight of President Maclaurin and some members of the Faculty of the Institute the United States would have been in a much more serious predicament concerning aviation during the war than it was.

But President Maclaurin and his associates had a vision of what aviation was liable to become and they acted on the inspiration of that vision, as they had acted on the vision of a future merchant marine for the United States which would require men trained in the service of marine architecture and navigation to meet the emergency which arose during the war. What the Massachusetts Institute of Technology did for the Merchant Marine is a wonderful story in itself — fully as wonderful as what it did for aviation.

Although the shipbuilding activities of the country had been at a minimum during the decade preceding the war, the Faculty of Technology knew for certain that there must be a future reaction, so it kept steadily at its duty of preparing men in naval architecture. The department was costly to maintain and the number of students necessarily small, but it continued graduating its six or eight marine engineers a year, and it is on these men that have rested largely the burden and responsibility of ship construction in the enormous expansion of the business which the past two years have witnessed.

With precisely the same kind of foresight Technology "sensed" the future, certain need of aerodynamical engineers, men who having been educated in the principles, could undertake the development and construction of air and hydroplanes. In the nineties it established its first wind tunnel, a modest affair in the Mechanical Engineering Laboratory, a conduit two feet square with the possibility of a wind through it of twelve miles an hour. This had been used for experiments with air currents, and in addition some researches were made with reference to forms of air propellers. It is interesting to note that of the graduates of the Institute of 1912, no less than ten selected for thesis subjects some phase of the aviation problem, two of them engaged at once in professional aeronautical work, while another, a Spanish young man, went home with the intention of devoting himself to military aviation. In the group of graduation theses of 1913, two were on aeronautical subjects, with others discussing motors and fuels. This serves to show how early the Institute began to think in terms of aerodynamics.

"It was in March, 1913," said President Maclaurin, "that I had some conversation with the secretary of the navy, to discuss whether it might not be practicable to undertake something in the way of the study of aerodynamics by its naval officers. Already, in compliance with an act of Congress, all naval constructors graduated at Annapolis were detailed to the Institute for finishing studies. Thus it is that all the younger men in this division are former students of Technology and members of its alumni body.

"The navy had not up to that time made any suggestions with reference to including aerodynamics in any of the courses, but it seemed to me, and I expressed the idea to the secretary, that it was a time when the government ought to be devoting attention to the scientific designing of aircraft. Already the Faculty of the Institute had very seriously discussed the question of establishing postgraduate courses in the subject."

At this time there was a young naval constructor, Jerome C. Hunsaker, attending the Institute who had been regularly graduated, receiving his M.S. in 1912, and still continuing with special work. At the suggestion of Dr. Maclaurin, Lieutenant Hunsaker was detailed by the navy to visit the aeronautic centers of instruction and laboratories in Europe, and, returning, to become an instructor in the new courses which Technology instituted in 1914.

Since an airplane is virtually a boat so far as lines, strains and propulsion are concerned, the new work was made a part of the Department of Naval Architecture, and under the direction of Professor C. H. Peabody, head of that department. The special instruction was given by three men, Lieutenant-Commander Hunsaker, whose specialty was aircraft design and theory of construction; Professor E. B. Wilson, who taught the mathematical and physical principles involved, and Professor, now Major J. C. Riley, who was an expert in motors. These three men developed with the war — the first to be in charge of airplane design in the navy under Admiral Taylor; the second to be a valued adviser of the Council of Defense and the government, and Major Riley, to important work overseas in the perfecting of motors, in which he is still engaged.

It was this experience with the Institute on the part of the navy which was the stepping stone to the complete confidence in it that later caused the only naval aviation detachment school to be established at Cambridge within the Institute's walls, where all of its men received from Technology professors the principles of construction and flight. It was this firm foundation on which Lieutenant-Commander Hunsaker built in the work of navy plane construction that has culminated with successful trans-Atlantic flight. The foundation was the clear discernment of President Maclaurin and his associates, which furnished for the right men an elaborate preparation in the principles of aerodynamics, and for this Technology is entitled to full credit.

It is of further interest to know that at the very beginning of the co-operation between the navy and the Institute the latter equipped an aerodynamical laboratory, fitted with a six-foot wind tunnel and special measuring devices unique in the country, whereby experiments of highest value were carried on. This apparatus, formerly in a little shed on the Cambridge grounds, is now installed in the du Pont laboratory, and in condition to furnish further valuable theoretical results.

One of the remarkable features of the whole story of Technology and airplanes is the number of alumni who have become famous in the aeronautical work, exclusive of the fliers, some of whom, like Dinsmore Ely, '18, Cyril M. Angell, '18, gave their lives in battle to the service of their country. Earle L. Ovington, '04, and Harry Atwood, '05, are among the pre-war aviators of popular fame; in the navy, Hunsaker, with his students in aerodynamics from Technology; while in the army, Henry Souther, '87, who, till his death, was in the highest place that a civilian could reach, with Captains Clark, '08, Harms, '15, Jones, '16, and Gorrell and Martin of '17. Some fifty other graduates of Technology are in the work of constructing airplanes or their materials or fittings, and all of these men were in the group that in the emergency gave their skill and experience for the salvation of their country.—Boston Globe.

A CHANGE IN THE BY-LAWS OF THE ALUMNI ASSOCIATION

According to the By-Laws of the Association notice is hereby given of a change in the By-Laws, suggested by the Council, May 26. This comes before the Council for final action after thirty days' notice.

Article I of the By-Laws of the Association to be increased by one section, Section 6, to read: The elected officers of the Association shall take office each year at a date to be fixed by the Council and not later than July 1.

STEAM ENGINES FOR AEROPLANES

Adams, '14, declares steam will supersede gasoline as motive power

Steam as the substitute for gasoline in the propulsion of aircraft of all types will be the greatest development during the next few years in navigation of the air, because the zenith in the refinement of the gasoline engine has almost been reached, according to Porter H. Adams, M. I. T., '14, who attracted international attention some years ago by the announcement of a plan to encircle the globe by aeroplane, and who did much in overcoming the preliminary obstacles for such a flight.

Mr. Adams has been devoting his entire time in the preparation of the preliminary plans for a steam power plant to be used in the large type of aeroplane since his retirement from the aviation section of the navy shortly after the armistice was signed. A graduate of Technology, he has won a considerable reputation for original investigations in aerial navigation.

"The advantages of a steam power plant used in aeroplanes will be very great," he said in discussing the experiments he is now carrying on. "My plan is to generate steam through the burning of oil. The present consumption of gasoline is so great that it will soon be a difficult problem to obtain sufficient quantities of high test fuel for use in the internal combustion engines so that they will operate successfully on lower grades of fuel or else limit the use of gasoline.

"The advantage of steam is that a properly designed steam plant will be able to use any type of fuel, from gasoline to the crude oils, and this reason, together with the fact that an efficient steam plant is the most reliable of all motive powers, is the reason that I am working on the problem of a steam power plant for the large type of aircraft which will come into commercial use as soon as the transatlantic flight is made."

The inventor planned to bring up the question of the adaptability of steam as a motive power at the Pan-American Aeronautical Convention here in May.

UNDERGRADUATE ACTIVITIES

WILLIAM B. BARROW, JR., '21

CONCENTRATED! That adjective more fully describes the social season at Technology this spring than any other. Deprived of the normal series of functions in the fall, the students have staged one event after another in quick succession during the spring term in an endeavor to make up the deficit.

Shortly after the mid-year examinations came the Musical Clubs concert at Simmons, followed by the usual dance. This was well attended by men from the Institute. The ball was kept rolling with periodic Dorm dances, Cosmopolitan Club dances, Fraternity house parties and formal dances, smokers and get-togethers of the various Engineering societies, and a series of Course Socials re-instituted by President and Mrs. Maclaurin. These happily conceived socials for bringing the Faculty and undergraduates together were most successful before the war, and fully realized their purpose during the past season. They were held at the president's mansion, and in general consisted of a " shadow play " under the direction of Professor Rogers, musical entertainment furnished by student talent, and impromptu skits by some one or two of those attending.

The culmination of the social season, of course, came with Junior Week. Far later than usual, but losing none of its zest thereby, the week was opened with that ten minutes of " intensified Hell," the "Technique" Rush. Urged on by the maddening tones of the " Technique " Band, P. T. Coffin, '21, C. R. Myers, '22, Monroe Haines, '20,, J. H. Scott, '20, and J. D. Crosby, '21, secured the five lucky paddles that entitled them to free autographed copies of this year's annual. Fifteen others secured paddles that give them the right to have their books signed by President Maclaurin.

The Junior Prom, in the hands of M. M. Whitaker, R. H. Gee, K. Roman, John C. Nash, W. L. Cofren and K. F. Akers, was a marked success. It was held at the Copley-Plaza, and dancing was continued until four in the morning. Decorations, music and favors were well chosen.

Performances of the Tech Show, " A Doubtful Medium," were given in Northampton, Friday matinee and evening, at the Hollis, in Boston, on Saturday afternoon and evening, and at the Somerville Theatre Monday evening. Of all the performances, perhaps the two on Saturday, before home audiences of keen appreciation, were the best. However, all were so well done, that it hardly seems fair to pick any single one as more exceptional than the rest. Walt Frazier, '19, F. S. Britton, '19, and J. A. Buerkin, '19, all of last year's cast, played the leading roles. E. W. Booth, '21, P. D. Appel, '21, W. J. Hamburger, '21, and J. A. Philbrick, '20, also took effective parts in the cast. The Show this year was featured by a ballet, exceptionally well staged. The Book was written by Jesse Stam, '19, and J. G. Lee, '21. W. T. Hedlund, '20, was responsible for most of the music. A sumptuous banquet was given the participants after the series of performances.

" Technique" 1920 has been declared the best Junior Annual since 1916. Certainly the reading matter, the photographs, the sketches and the " grinds " have been balanced in a professional fashion. " Technique " 1921 is to be in the hands of the following: R. H. Smithwick, Editor-in-Chief; W. S. Barker, Business Manager; H. C. Burton and E. P. Clarke, Assistant Managers; W. Dean, Treasurer. The editorial portfolios have been awarded as follows: R. Hayward, Art Editor; H. Macmillan, Statistics; F. B. Kittredge, Societies; Z. Giddens, Grinds; J. Worcester, Faculty; I. D. Jacobson, Portfolio. Work has already begun on the next year's issue and the editors are straining every effort to excel the standard set by their predecessors.

Ranking third in the whole country in circulation among periodicals of its class, the "Voodoo," superseding the old "Woop-Garoo," has rapidly leaped into prominence as the "Life" of the Institute. This monthly is headed by Edward Edwards, editor-in-chief; R. H. Smithwick, treasurer; D. E. Stagg, managing editor; R. J. Spitz, business manager; E. Davis, circulation manager; and K. R. Sutherland, publicity manager.

"The Tech," fully manned in all its departments, entered Volume XXXIX with rosy prospects. Its correspondents have even written from London, and a letter from an English nobleman is good testimony of its extensive circulation. Three thousand copies is not an exceptional issue. Following the precedent of the past three years, "The Tech" will continue publication throughout the summer. The general manager is C. B. Capps, '20, supported by H. V. Howes, '20, editor; Carole A. Clarke, '21, managing editor; M. A. Loucks, treasurer; R. A. St. Laurent, '21, advertising manager, and Scott Wells, circulation manager.

Hampered by the fact that rehearsals had to begin too late to sign up many contracts for concerts, the Musical Clubs this spring have not had as successful a season as usual. Besides the Spring concert at the Somerset, the Simmons concert, and performances at Somerville, Lynn, Winchester and several other minor points, the season has been mostly rehearsing. Much better results are anticipated next year by the officers. The election at the banquet which closed the activities resulted in electing H. N. Landis, '21, general manager; R. C. Rundlett, '21, treasurer; F. L. Raymond, '21, publicity manager. The leaders chosen were, for the Glee Club, H. O. Davidson, '20, assisted by L. W. Conant, '20; for the Mandolin Club, J. R. Hotchkin, '21, assisted by C. A. Breed, '21; for the Banjo Club, M. C. Knox, '20, with F. W. Walton, '22, as assistant.

The N. E. I. A. A. Track championship was won by Technology for the third consecutive time. In the I. C. A. A. A. A. meet Fortune was not so kind, and the Institute was forced to be content with ninth place. Cornell won the meet. The injury of Mich Bawden, '21, a short time before deprived the team of a star sprinter both in this contest and in the dual meet with Dartmouth. The team was further crippled in the match at Dartmouth by the absence of Dandrow, star hammer thrower, and Nagel, pole vaulter. By superior strength in the Field events, Harvard was able to take home the laurels in the dual meet with that college.

Consistently winning all their meets for the past four years, the Swimming Team only felt defeat once this year, when Yale's natators proved too strong. Handicapped by the need of a tank of their own, this record of one defeat in four years is more of a credit to the team than usual. C. W. Scranton, '21, is next year's captain. Other members of the team are M. Untersee, '19; C. D. Greene, '21; S. M. Biddell, '22; H. C. Fish, '22; T. T. O'Daly, Jr., '22; W. B. Purinton, '22; R. H. Skinner, '22; and I. H. Rogavin, '21.

The freshman first eight won their races with Stone, Middlesex, Tufts and Harvard Regatta. The Sophomore Field Day Crew, and Harvard, '22, are the only crews that have been able to nose out a victory against them. E. T. Steffian, '21, has been elected general manager, with G. P. Anderson, '22, as his assistant. For the class crews, W. F. Clements, '21, will manage the 1921 aggregation, E. W. Willett the 1922 crew.

Up to the present the winner of the Tennis tournament cannot be picked. The

Varsity team this year, composed of Broockman, '20; Barron, '20; McWane, '21; and West, '21, have a string of victories to their credit.

The annual Interclass Track meet went to the sophomores. The juniors lost by one point, the final score being, 1921, 52-½; 1920, 51-½; 1922, 41-½. Two records were broken, the pole vault being set at even twelve feet by Nagel, and the hammer-throw being pushed up to 134 feet, 6½ inches by Dandrow.

TECHNOLOGY EXPERT SETS COST OF WAR TO ALLIES AT $200,000,000,000

According to Lieutenant-Colonel D. C. Jackson, head of the Electrical Engineering Department of the Institute, and a personal friend of President Wilson, the war that will be officially ended with the signing of the peace treaty in Versailles has cost the United States and the Allies $200,000,000,000. The lieutenant-colonel arrived home early in May, after having spent considerable time in the devastated regions of France, Belgium and Italy, securing data on war costs and damages for the use of President Wilson at the Peace Conference.

Colonel Jackson had a staff of two hundred and fifty experts under him, officers and men, a formidable statistical force, with which he went over the devastated districts, making exhaustive investigations and examinations. Colonel Jackson said he had included property damage, pensions, cost of equipment and many other items in his estimate of the total cost of the war to the United States and the countries associated with the United States in the campaigns against the Central Powers.

The colonel said that he could not tell whether the United States would ask for part of the indemnity to be asked of Germany. He added that certain French newspapers, supposed to be inspired, have published the fact the French will claim $16,000,000,000 from Germany and the Belgians $8,000,000,000.

"These demands are not so extravagant," he said, "when it is considered that the devastation caused in Belgium and Northern France by the Germans is something that Americans who have not seen the ruined area cannot understand. In thousands upon thousands of square miles there is not a building standing."

TECH MAN IN "Y" WORK

The San Francisco Young Men's Christian Association has added educational guidance to its already large program of service for discharged soldiers and sailors. A. L. Marston of the Massachusetts Institute of Technology, and lately with the United States Army, has been engaged to take charge of this work. He will give educational advice not only to the eight hundred discharged nen now members of the San Francisco Association, but to enlisted men at the Young Men's Christian Association downtown club at 149 Powell Street and to discharged men generally.

GOVERNMENT TAKES OVER TECHNOLOGY OBSERVATORY

UNDER authorization of the current appropriation act for the Department of Agriculture, which provides $10,000 for investigations in volcanology, the United States Weather Bureau on February 15, 1919, formally took charge of the volcanological observatory on Kilauea, Hawaiian Islands. Prof. T. A. Jaggar, Jr., formerly of the Massachusetts Institute of Technology, who has been director of the observatory since its foundation, will remain in charge. The investigations at Kilauea were begun in 1912, under the auspices of the Massachusetts Institute of Technology, and since 1913 have been maintained at the expense of the Hawaiian Volcano Research Association, consisting chiefly of residents of Honolulu. It is expected that the Weather Bureau's work in volcanology will be developed in many details and eventually be extended to Alaska and other regions under the control of the United States in which active volcanoes exist.

THE HORRORS OF WAR!

Letter (informal) to the editor of the Review

TECH BUREAU,
April 25.

Dear Rogers:

There is a jolly crowd here in the Bureau, as usual. Some one stepped behind George Gibbs' desk and picked up this memorandum.

" Chuck Loomis is now a captain.
Send B. V. D.'s to Chuck Loomis."

Before the laugh died out I was told to send it on to you — for interest or amusement.

(Signed) PENN BROOKS, '17.

O.K. E. P. BROOKS, Lieut.

AN ARTILLERY SECTION FOR THE R. O. T. C.

LIEUTENANT-COLONEL Fred M. Green, C. A. C., has been detailed to Technology by the War Department for the purpose of organizing an Artillery Section of the Reserve Officers' Training Corps for the sophomore class. Some of the academic studies which the men regularly pursue will count as part of the military work. They will receive military credit toward a reserve commission and also a bonus of about $140 a year which the government offers to those who take military work in their upper-class years.

MANY ALUMNI ATTEND FRENCH AND BRITISH UNIVERSITIES

The Technology Bureau of the American University in Paris announces the following additions to the University list at Toulouse: D. N. McMurtrie, '15, H. L. Cassidy, '19, J. M. Bugbee, '18; at the London School of Economics and Political Science: I. G. Brown, '15; at Trinity College, Cambridge: R. B. Haynes, '13; at Bellevue: A. B. Merry, '10, J. B. Woodward, '18; at the Sorbonne: W. P. Sammet, '21, D. L. Patten, '16; at Grenoble: H. F. Marshall, '19; at Poitiers: G. A. Coleman, '16; at Besaneen: M. B. Lewis, '14; at Bordeaux: H. W. Ericksen, '20.

PROFESSOR JACKSON BACK TO WORK

Another of the heads of departments at the Massachusetts Institute of Technology is about to resume his duties after a period spent in the service of his country. Professor D. C. Jackson, head of the department of electrical engineering, landed in May, after about a year of special service in France. His mission, at the time he left Boston, was not disclosed, but naturally it was in the line of the utilization of electricity. During his absence Prof. R. R. Lawrence has been acting head of the department.

The instruction of marine engine room officers was resumed at Technology today after an interruption of a couple of months on account of lack of appropriation.

SCHOLARSHIP FOR TECHNOLOGY

The Sons and Daughters of the National Society of New England women, formerly known as the Second Junior Sons and Daughters, were officially organized recently as Puritan Colony, with a membership of eighteen, by Mrs. Henry Clark Coe, first president general of the National Society of New England Women, in response to a special request from the president general, Mrs. Robert Fowler Cummings of Chicago.

The Colony has taken for its object the founding of a scholarship at the Massachusetts Institute of Technology in Boston and for its local activity it will co-operate with the work at Colony House, under the leadership of Mrs. John Lansing Swan.

PROFESSOR SEDGWICK IN CALIFORNIA

Prof. W. T. Sedgwick of the Massachusetts Institute of Technology and the Harvard-Technology School of Public Health, left Boston on May 1 for California, where he is to give instruction in "Sanitary Science and Public Health," and in "Public Health Problems" during the summer session of the University at Berkeley. Professor Sedgwick recently has been elected to membership in the International Health Board of the Rockefeller Foundation and also has been appointed directing sanitary engineer, with the grade of assistant surgeon general, in the Reserve of the United States Public Health Service.

TO CLASS SECRETARIES

An attractive opportunity is offered by the Lake Placid Club in the Adirondacks, for class reunions this autumn. This club has seventy buildings with eighteen hundred rooms. From Boston alumni could take the Boston and Albany train to Utica. After September 15 the club is glad to make arrangements with alumni who desire to have class reunions. The expense is reasonable and further accommodations can be had for women, former students or wives of the alumni.

NO JUNE EXERCISES THIS YEAR

Owing to the fact that most of the class of 1919 graduated without ceremony last fall and left the Institute immediately for war work, there are no graduation exercises this year, and, consequently, no alumni reunion. But save up for June, 1920—that's the big year!

PUBLICATIONS OF THE INSTITUTE STAFF

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Photo by R. H. Ranger, '13

AFTERNOON COFFEE IN PARIS
Gibbs doesn't like tea

Photo by R. H. Ranger, '13

DAVID READ, '18
Gibbs' assistant in Paris

Photo by R. H. Ranger, '13

GEORGE CROCKER GIBBS, '00

Photo by R. H. Ranger, '13

THE AMERICAN UNIVERSITY UNION IN PARIS

The men on the balcony are Tech men

UNDERGRADUATE ACTIVITIES

William B. Barrow, Jr., '21

(*Continued from page 353*)

Owing to an error this article was not printed in full in its proper place. — Ed.

Sophomores and freshmen, meeting in their annual Field Day in the early part of May, furnished some thrilling contests in a crew race, a baseball game, a relay race, and a tug o' war. The 1921 teams won the first three events, but the freshman tug o' war team proved the stronger in that event, winning the first two pulls. The 1921 numerals will grace the Field Day cup after all. It will be up to 1922 to redeem herself next year.

The show chosen for the aftermath of the athletic contests was "Sinbad," starring Al Jolson. Over a thousand students attended, with " bells on."

As has been the custom since Technology moved across the river, the class elections were held in the first week in June with the following results:

	1920	1921	1922
President	N. G. Abbott, Jr.	Garvin Bawden	W. F. Ferguson
Vice-President	Kenneth Akers	L. W. Conant	W. C. Morse
Secretary	K. J. Roman	F. W. Kittredge	W. B. Purinton
Treasurer	M. S. Burroughs	E. W. Davis	C. E. Brokaw
Inst. Committee	John Nash	R. J. Spitz	S. M. Biddell
	E. D. Ryer	W. F. Young, Jr.	A. L. Johnson
Exec. Committee	Percy Bugbee	H. P. Junod	N. O. Robinson
	K. D. Patterson	R. W. Barker	E. W. Hammond

Each of the engineering societies has closed its season with a banquet as has been the custom. The mechanical engineers have announced the following elections: H. O. Davidson, '20, president; W. F. Dewey, '20, vice-president; Spooner, '20, secretary; G. I. Brown, '20, treasurer; governing board, K. S. Roman, '20, F. L. Bradley, '20, A. H. Tuttle, '19.

All the former officers of the Electrical Engineering Society have been returned. H. B. Deal, '20, president; R. D. Booth, '20, vice-president; Miss Florence Fogler, '20, secretary; J. H. Wilson, '20, treasurer; executive committee to consist of J. G. Moir, '20, and H. F. Smiddy, '20.

Cleofan, the women's organization, reports a most successful year, although details are not available as to the nature of these successes. The officers are: President, Dorothy Brownell, '20; vice-president, Florence Fogler, '20; secretary, Cornelia Nelson, '21; treasurer, Valborg Aschehoug, special.

The interfraternity baseball championship goes to Beta Theta Pi. The runners-up were Phi Beta Epsilon, Sigma Chi and Kappa Sigma.

With a total subscription of over two millions Technology led all of the colleges in the country in the Victory Loan. The blue and white button was a common and popular lapel decoration during the weeks of the campaign.

Not satisfied with breaking records, the students tried their hand at breaking strikes during the telephone tie-up. Unfortunately, their good intentions were misconstrued by the strikers, and more than a few received broken pates and sore muscles for their pains. The general consensus of opinion among those that returned seemed to be that crowd psychology and economic theories work a great deal better in classroom recitations than in actual practice. Militant telephone girls are not the most tractable group of individuals in the economic system, they found.

Only twenty-eight men met their Waterloo in the mid-year exams. Sixteen of these were junior freshmen, seven were regular freshmen, four were sophomores and only one a junior.

Some agitation has begun for a change in the existing examination system. The students resent being so closely proctored during the finals, and are endeavoring to find a scheme that will eliminate this feature. At the same time there are more radical suggestions of abandoning the present examinations as unfair and unsatisfactory, but few suggestions are to be found for a better. It will be interesting to note what lines this reform will follow in the fall. Right now the impending finals prevent the progress of any endeavor not along the lines of intensive review.

MISCELLANEOUS CLIPPINGS

Education to Allay Unrest

Education and Americanization as the best counter agents of Bolshevism were urged before the legislative Committee on Education today. Professor William T. Sedgwick of Technology spoke for the bill recommended by the Special Recess Commission on Education which provides that after January 1, 1920, no person over twenty-one years and less than forty-five shall be employed in any working establishment, or by any contractor employing more than fifty persons, unless such person can speak, read and write English equal to the proficiency of the fourth-grade school or unless such person attends, for three hours a week for four weeks in the year, a school approved by the local authorities.

Professor Sedgwick told the committee that he is chairman of the Massachusetts Security League and is much interested in the Americanization of immigrants. "It is necessary to make our people more homogeneous. Today they are likely to herd together with only those who speak their own language. The State Board of Education is trying to prevent this evil and manufacturers are establishing classes in the working time of their employees and are even paying them for attendance. This is good policy, for it will result in better operatives, fewer accidents and more intelligent work. This bill puts pressure on manufacturers and contractors to promote education of their employees. This is not a 'highbrow' enterprise, but only an effort to promote Americanism and promoting intercourse among our immigrants from mouth to mouth. It will be a good time for both manufacturers and employees."
— THE BOSTON TRANSCRIPT.

War and the Chemist

Chemists and laboratory men will be the determining factors in future wars, if wars are fought, according to Dr. Arthur M. Noyes, distinguished chemist of the Massachusetts Institute of Technology, who is in Pasadena to engage in research work at Throop College of Technology, and who spoke today on the part science played in the world war. Dr. Noyes addressed the students of Throop and a large company of visitors at the college chapel.

According to Dr. Noyes, the United States must continue its chemical research work as a measure of preparedness. He believes that continued scientific research is as necessary as military training.

"We have no assurance," said Dr. Noyes, "that some nation in the future will not make use of gas warfare, employing the new and more effective gases developed through research. If the Germans had made better preparation for their first gas attack, and if they had employed the greater concentration of gas and powerful devices for using it that were later used, nothing could have prevented them from reaching the channel ports, as at that time the French and English were unequipped for gas warfare."

According to Dr. Noyes, the question of the inhumanity of the use of gas in battle is a question that has been much discussed by men of science. "A comparison of the use of gas and explosives is interesting," said Dr. Noyes. "Chemical warfare is not crippling, there is no loss of limbs and very little blindness resulting. After all, the number of casualties from the use of gas is not large. The most serious effect is on the lungs and the agony of suffocation by those badly gassed is extreme. Whatever the decision may be on the inhumanity of using gas, it is a hopeless thing to prohibit. It is of the greatest importance to continue research in the field of gas warfare. This war has determined that it is not the human element that wins and gains advantages." — Los Angeles Times.

TUITION TO BE $300

Increase of $50 will go into effect in the fall of next year

The Massachusetts Institute of Technology is to raise its tuition fee to $300, against the $250 which has been the amount for a good many years past. This fact is announced in the Institute's new pamphlet on General Information. The advance will not be in effect until the fall of 1920, students entering during the academic year 1919-1920 paying $250 for that year and $300 for succeeding years. The old fee will apply to all students now in the Institute till they have completed their courses.

Upon one condition could this rising cost of collegiate instruction be greatly regretted. If the rise were left unaccompanied by an equal and compensating increase in the size and extent of the scholarship support offered to students of little means, the colleges had better go out of business than advance their charges. Fortunately, however, no such alternative is proposed. In nearly all cases the announcement of higher charges has gone hand in hand with an announcement of larger and more accessible scholarships for the boys who deserve and require them. With this much taken care of, the higher tuition charges need cause little concern. They result from the increased expenses which colleges, in company with all other institutions and undertakings have been forced to bear in the general readjustment of price levels which has lately occurred. If the exaction of a somewhat higher charge from the students who can afford to pay more for their tuition leads to a corresponding increase in the salaries of college professors, and at the same time does not fall as a burden upon the students who cannot afford to pay more, it will be rather a blessing than an injury.

In addition there is the student tax which is assessed on all male members of the student body, half the amount being collected from those who pay only one term's tuition. From women students there will be collected $3 or $1.50, according to the time that they are in the school. The tax will be remitted and a corresponding amount furnished from a fund applicable to such uses, when the student receives the benefit of a scholarship. The proceeds of the tax will be devoted to the promotion of student life at Technology with especial reference to the physical and social welfare of the students. No part of the tax is to be given over for athletics or for other functions unless open without charge to every member of the student body. — Boston Transcript.

IN THE PUBLIC EYE

NAVAL CONSTRUCTOR J. L. ACKERSON, '06, was appointed by Chairman Hurley to succeed Director-General Charles Piez, of the Emergency Fleet Corporation, in full charge of ship construction. Mr. Ackerson already was a vice-president of the corporation. Mr. Piez presented his resignation several months ago.

The new chief of construction, Mr. Ackerson, is a practical shipbuilder. He was born in Michigan in 1881 and was graduated from the Naval Academy in 1901. After service at sea he was assigned to the construction corps, going later to Massachusetts Institute of Technology for postgraduate work. He became connected with the Shipping Board as aide to Admiral Capps when the latter was general manager of the Fleet Corporation.

PROFESSOR ARTHUR H. BLANCHARD, of New York, one of the country's foremost teachers of highway engineering, who was in charge of the graduate course in highway engineering at Columbia University until that institute dropped the course temporarily a short time ago as a war measure, but who still keeps his office there, has been secured by Professor Spofford of the Civil Engineering Department to give the third year course in highway engineering at Technology this term. Professor Blanchard takes the place of Professor Hector J. Hughes of Harvard, who has given the course here in past years.

Professor Blanchard is president of the National Highway Traffic and of the American Road Builders Association. He was a member of the advisory committee on state highways in New York, appointed by Governor William Sulzer, is consulting highway engineer for the Board of Water Supply, New York, consulting engineer on bituminous pavements for the office of the commissioner of public works of the borough of Manhattan, consulting engineer to the New York and Pennsylvania state highway departments, a member of the advisory board on highways, New York state department of efficiency and economy. He was United States reporter to the Second International Road Congress at Brussels, 1910, and to the Third International Road Congress at London, 1913. He was United States representative on the International Committee on standard tests for highway materials, 1914.

He is a member of the American Society of Civil Engineers, the Societe des Ingehieurs Civils de France, the Canadian Society of Civil Engineers, the International Association for testing materials, the International Association of Road Congresses, the American Society for Municipal Improvements, National Highways Association, American Highway Association, Rotary Club, Engineers of New York, Delta Tau Delta and Sigma Xi.

MAJOR JOHN C. DAMON, '05, Engineers, United States army, who was taken from the 114th Regiment of Engineers for special duty in the Power Section of the War Industries Board, has now finished this work and returned to civil life, and entered the organization of the West Penn Power Co. Major Damon was born in 1882 in Concord, Mass., and was graduated from the Massachusetts Institute of Technology in 1905, remaining there the following year as assistant in the electrical engineering laboratory.

His professional experience began in the construction department of the Chicago Telephone Co., but he soon left this for construction work on large hydroelectric developments and transmission lines in the West. In 1909 he became superintendent of operation of the Colorado division of the Telluride Power Co., and in the following two years reconstructed and brought up to a high state of efficiency a large part of this pioneer electrical development. In 1911 he entered the organization of the Trinidad Electric Transmission Railway and Gas Co., Trinidad, Colo., and was active in the design and construction of its steam plant at Walsenburg, Colo. In July, 1912, he entered the engineering department of the Electric Bond and Share Co., which took up at that time the development of the Utah Power and Light Co. After working on designs for one hundred thirty thousand volt switching and substations and transmission lines, he went to Utah as engineer on the construction of these projects and later became assistant chief engineer of the Utah Power and Light Co.

In the fall of 1916, feeling that the United States should take its stand for justice in world affairs and could not long hold aloof, Mr. Damon decided to enter the Engineer Reserve Corps of the army, and subsequently received a commission as captain. He was ordered to Fort Leavenworth for training October 1, 1917, and in December was attached to the 114th Engineers at Camp Beauregard, Louisiana. Early in January, 1918, Captain Damon was relieved from duty with the 114th Engineers and detailed to the Power Section of the War Industries Board. In this capacity he was assigned to make studies of and recommendations for the power supply in several of the heaviest industrial districts of the East, including Philadelphia, Baltimore, Lancaster, Pittsburgh and Eastern Ohio, and the New England States. In September, 1918, Captain Damon was placed in charge of the development and control of the power supply in the Pittsburgh and Eastern Ohio District, and in the following month was promoted to the rank of major.

Major Damon is a member of the American Institute of Electrical Engineers and of other engineering societies.

FRANK F. FOWLE, '99, has formed a consulting engineering partnership under the firm name of Fowle & Cravath, with offices at Chicago. Frank F. Fowle, who until recently served as one of the receivers of the Central Union Telephone Company, was formerly a consulting engineer. Mr. Fowle was graduated from the Massachusetts Institute of Technology, Boston, in 1899, in the electrical engineering course, and then served nine years with the American Telephone and Telegraph Company in various engineering capacities, finally serving as manager of the Chicago territory of the long-lines system. From 1908 to 1912 Mr. Fowle was engaged in consulting engineering practice, headquarters in Chicago. In 1912 he went to New York and jointly with Dr. A. S. McAllister was in charge of the editorial department of the "Electrical World." In 1913 Mr. Fowle became editor-in-chief of the "Standard Handbook for Electrical Engineers" and entered engineering practice again in New York. Early in 1914 he was appointed one of the receivers of the Central Union Telephone Company, serving until recently discharged by the court. Mr. Fowle was elected a manager of the American Institute of Electrical Engineers on May 1. He has also recently been re-elected manager of the Chicago Section, Illuminating Engineering Society, and is a member of the development committee of the Western Society of Engineers.

NEWS OF ALUMNI ASSOCIATIONS

AKRON TECHNOLOGY CLUB—The Club held its first meeting at the Akron University Club, April 15, 1919, after a long period of inactivity, due to the war. Twenty-nine members attended the meeting and listened to talks by Mr. C. R. Johnson, who was a major in the Chemical Warfare Service, Mr. E. C. Gagnon, who was a first lieutenant in the Chemical Warfare Service; and Mr. G. W. Sherman gave a talk on the salvage plant which he was interested in organizing in Akron as a war measure.

Mr. H. S. Morse, Akron Service Director, outlined the duties of his office and his plans for the future in the growth of Akron.

After the talks, many enjoyed the privileges of the club in the form of playing cards, bowling, etc.

The second meeting was held at the Akron University Club on June 13, which thirty members attended.

At this meeting Mr. P. W. Litchfield, who had just spent a couple of months in Europe at the request of the Navy, for the purpose of studying aircraft and its possibilities, gave a talk which was very interesting and very much appreciated by all who attended.

The Akron Club plans to hold meetings once each month and at present is making plans for meeting at one of the summer resorts in conjunction with the Technology Club of Cleveland. As there is considerable rivalry between the two clubs, games of a competitive nature will bring out a good attendance and all present will enjoy a good time.

The following is an up-to-date list of members of the Akron Technology Club:

R. S Scharr, 292 Spruce Street, Akron, Ohio; W. H. Eager, Whitman-Barnes Co., Akron, Ohio; H. S. Morse. Director of Public Service, City Building, Akron, Ohio; H. Litcher. 1055 Norka Avenue, Akron, Ohio; F. R. Peabody, Ira, Ohio; J. W. Kittridge, Diamond Match Co., Post Office 393, Barberton, Ohio; A. T. Gradolph, 641 Crosby Street, Akron, Ohio; R. W. Ferris, 55 Rose Avenue, Akron, Ohio; J. Tuttle, Experimental Department Firestone, Akron, Ohio; L. M. Latta, 55 Mull Avenue, Akron, Ohio; C. A. Lloyd, Carmichael Construction Co., Hamilton Building, Akron, Ohio; H. H. Partridge, Firestone. Tire and Rubber Co., Akron, Ohio; H. B. Pushee, General Tire and Rubber Co., Akron, Ohio; W. A. Sheppard, B. F. Goodrich Co., Sales, Akron, Ohio; B. W. Sherman, B. F. Goodrich Co., Department Manager, Akron, Ohio; J. A. Christie, Superintendent Swinehart Tire Co., Akron, Ohio; H. M. Glazier, C armichael Construction Co., Akron, Ohio; R. T. Bailey, City Engineer, Kent, Ohio; J. S. Sneddon, Babcox & Wilcox, Barberton, Ohio; W. B. Ford, 25 Orchard Road, Akron, Ohio; W. D. Spangler, Northern Ohio Traction & Light Co., Akron, Ohio; B. H. Clingerman,, Engineer Department, B. F. Goodrich Co., Akron, Ohio; P. W. Litchfield, Factory Manager, Goodyear Tire & Rubber Co., Akron, Ohio; C. N. Hand, Laboratory, Goodyear Tire & Rubber Co., Akron, Ohio; L. G. O'Dell, Manager Crude Rubber, Goodyear Tire & Rubber Co., Akron, Ohio; G. M. Sprowls, Tire Design, Goodyear Tire & Rubber Co., Akron, Ohio; E. C. Gagnon, Technical Service, Goodyear Tire & Rubber Co., Akron, Ohio; W. J. Kelly, Laboratory, Goodyear Tire & Rubber Co., Akron, Ohio; W. P. Keith, Technical Service, Goodyear Tire & Rubber Co., Akron, Ohio; G. A. Sackett, Standards Division

Goodyear Tire & Rubber Co., Akron, Ohio; J. E. Hale, Chief Tire Designer, Goodyear Tire & Rubber Co., Akron, Ohio; M. C. Brock, Production Department, Goodyear Tire & Rubber Co., Akron, Ohio; J. H. Dunlap, Manager Standards Division, Goodyear Tire & Rubber Co., Akron, Ohio; W. H. Price, Jr., Technical Service, Goodyear Tire & Rubber Co., Akron, Ohio; C. R. Johnson, Development Manager, Goodyear Tire & Rubber Co., Akron, Ohio; D. R. Stevens, Manager Labor Department, Goodyear Tire & Rubber Co., Akron, Ohio; B. Darrow, Experimental Department, Goodyear Tire & Rubber Co., Akron, Ohio; L. T. Cribben, Tire Design Department, Goodyear Tire & Rubber Co., Akron, Ohio; W. G. O'Brien, Chemical Engineer, Goodyear Tire & Rubber Co., Akron, Ohio; W. S. Wolfe, Technical Service, Goodyear Tire & Rubber Co., Akron, Ohio; F. L. Cook, Tire Design Department, Goodyear Tire & Rubber Co., Akron, Ohio; W. H. Fleming, Production Engineer, Goodyear Tire & Rubber Co., Akron, Ohio; K. B. Kilborn, Experimental Engineer, Goodyear Tire & Rubber Co., Akron, Ohio; N. E. Kimball, Experimental Department, Goodyear Tire & Rubber Co., Akron, Ohio; H. E. Morse, Experimental Department, Goodyear Tire & Rubber Co., Akron, Ohio; B. H. Hale, Chemical Department, Goodyear Tire & Rubber Co., Akron, Ohio; G. H. Cole, Department 110A, Goodyear Tire & Rubber Co., Akron, Ohio; W. A. Snow, Engineer Planning Department, Goodyear Tire & Rubber Co., Akron, Ohio; L. R. Westbrook, 322 Grand Avenue, Akron, Ohio; R. J. McLoughlin, University Club, Akron, Ohio; P. C. Jones, Electrical Engineer, Goodyear Tire & Rubber Co., Akron, Ohio. — W. H. FLEMING, '16, Secretary, 350 Wildwood Avenue, Akron, Ohio.

CHICAGO—THE TECHNOLOGY CLUB OF CHICAGO, about to be incorporated under the laws of the State of Illinois, is the successor of the old Northwestern Association, M. I. T.

At an enthusiastic meeting held on February 14, 1919, its constitution was adopted and the following officers were elected: President, William T. Blunt, '74; vice-president, Charles E. Lord, '98; secretary-treasurer, Henry A. Pemberton, '03, 732 Monadnock Building, Chicago, Ill.

It is hoped and believed that, following the close of the war and the adoption of its new form of existence, the club will resume its former activity. Regular Tuesday noon lunches are held at the Chicago Engineers' Club, 314 Federal Street, and the directors will endeavor to provide occasional outings during the coming season.

The meeting above mentioned was presided over by the out-going president, Frank F. Fowle, '99, and was made especially interesting by a good dinner, followed by a breezy illustrated talk upon experiences in the Hudson Bay region, given by Mr. James Albert Green, of Cincinnati, Ohio, a brother of Lonsdale Green, '87.—WILLIAM T. BLUNT, '74, President.

CLEVELAND.—THE TECH CLUB OF CLEVELAND got together at the University Club of this city for a spring dinner, on June 14, for the purpose of electing officers and to let the members who had just returned from France tell of their experiences.

Mr. Lapham talked on representing the United States to the French.

Mr. Zamore traced the activities in the war of the 1st Engineers, 1st Division.

Mr. Hellman spoke of his trip to Europe as a part of the Cleveland Chamber of Commerce.

Mr. Eicher (with a German name), told us how he eluded the combined French and American Secret Service.

The new officers are: H. B. Richards, president; G. H. Hellman, vice-president; B. V. Zamore, '16, secretary-treasurer.

Those present were: Cady, Brown, Sherman, Patrick, Marble, Crosby, Ingraham, Dunn, Lapham, Bowers, Hatfield, Merryweather, Metcalf, Pratt, Cleaveland, Zamore, Hellman, Eicher.—B. Zamore, Secretary of Cleveland Technology Club. (*Address?*)

HARTFORD—TECHNOLOGY CLUB OF HARTFORD, CONN.—The Annual Meeting and Dinner of the club, 44 Prospect Street, Hartford, Conn., was held at six o'clock, Saturday evening, March 15, 1919. Speakers—J. O. Smith of Wilson Welder and Metal Company, New York. Lantern Slides—first public exhibit of repairs to engines of interned German ships. Van Rensselaer Lansingh, '98, who was in Paris, France, over a year, on the College Union Committee, talked on his experience "over there," illustrated by slides.

At the annual meeting of the club, held March 15, it was voted to make the dues for the ensuing year $1.25, as the treasury was reduced to sixty-five cents, no dues having been collected since 1910.

Thirty-eight members were present and paid the dues, and I hope those who were not present will send check immediately.

The club is booming. We are holding luncheons every second and fourth Thursday of each month at the City Club, at 12.15, and always have an entertaining speaker as one guest.

Officers elected were: H. P. Maxim, president; George L. Mylchreest, vice-president; and George W. Baker, secretary and treasurer.

You cannot afford to lose interest in the club at this time of great possibilities for entertainments and the progress of the club.—George W. Baker, '92, Secretary and Treasurer, Box 983, Hartford, Conn.

MANCHESTER—THE TECH CLUB OF NEW HAMPSHIRE.—The club will hold its ninth annual outing as the guests of its president, E. W. Rollins, '71, at his summer home, Three Rivers Farm, Dover, N. H., on June 29. The officers of all other associations are privileged to attend, and will be heartily welcomed.—Walter Davol, '06, Secretary, 819 Elm Street, Manchester, N. H.

NEW HAVEN COUNTY TECHNOLOGY CLUB.—The second annual banquet of the New Haven County Technology Club was held Saturday, March 29, at the New Haven Lawn Club. Professor C. E. A. Winslow acted as toastmaster, and was ably assisted by the following speakers: Professor Dewey, of the Institute; Mr. Van Rensselaer Lansingh of the Paris Bureau; and Mr. J. E. Otterson, president of the Winchester Repeating Arms Co.

The evening was most enjoyable and the club was fortunate in seeing slides taken by Mr. Lansingh at the front. Besides the New Haven Tech men, there were men from Waterbury, Bridgeport and Hartford.

The following men were present: C. E. A. Winslow, D. R. Dewey, Van Rensselaer Lansingh, J. E. Otterson, A. T. Hopkins, H. M. Wilcox, R. L. Parsell, C. F. Suhr, T. G. Merriman, W. H. Bassett, J. S. Gravely, E. W. Taft, A. C. Jewett, Edwin Pugsley, H. Gfroerer, L. A. Bigelow, H. G. Shaw, J. C. Bradley, E. N. Taylor, C. T. Dunn, Henry D. Hooker, Edwin Upham, E. A. Teeson, T. D. Parsons, Stuart M. Boyd, L. H. Marshall, M. E. Goodridge, Edward E. Allen, W. T. Jones, E. W. Rutherford, C. R. Haynes, George Nichols, Ernest M. Smith, C. H. Graesser.

The spring meeting of the Club was held at Waterbury, Conn., on Saturday, May 24. Thirty-five Tech men sat down at dinner at the Waterbury Club. George

Nichols was toastmaster and with the assistance of the Dinner Committee arranged a most enjoyable evening. A very cordial welcome was extended by Charles L. Holmes, '88, of the Waterbury Club.

During the course of the dinner the annual election was held and the following officers elected as a governing board: President, Arthur T. Hopkins, '97; vice-president, Herbert M. Wilcox, '04; member at large, John C. Bradley, '07; secretary, Roy L. Parsell, '14.

Four teams were drafted to engage in bowling later in the evening. Each team captain was presented with a banner of his team as follows: " Waterbury Watch," " Gumshoers," " Brass Band " and " Gunmen."

All members present were provided with gas masks and tin helmets which were worn while the speakers were at work or when other emergencies arose.

Ernest Pelton was present with a delegation from Hartford who extended an invitation to Saybrook for the annual Clam Bake with Connecticut Valley Technology Association on June 28.

After the Post Prandials had been disposed of, the bowling contest was held. The " Gunmen " were successful both in capturing the team prize and prize for highest individual roller—Herby Wilcox. " Dinny " Chatfield received the prize for being the noisiest rooter.—Roy L. Parsell, '14, Secretary, care of Winchester Repeating Arms Co., New Haven, Conn.

PANAMA—THE TECHNOLOGY CLUB OF PANAMA had another of the frequent meetings at the Hotel Tivoli, Monday evening, April 28, 1919. Witmer, '08, had just come up from Chuquicamata, Chile, where he was employed with the Chile Exploration Company, and the alumni in the Canal Zone got hold of him and arranged a meeting.

Witmer told many interesting anecdotes of the mines, with which he was connected as an electrical engineer. Among the points were the mixups due to the use of German machinery and odd frequencies, the use of metric sizes on shafting and all machinery, and oddest of all, the use of meter and inches in a level or bench mark elevation. Having spent two and a half years there, he is pretty conversant with the electrical end of it.

After dinner the party adjourned to the porch, where the talk became general. Reinforced concrete, structures, transmission lines and prohibition all came in for a share of the discussion. As the military members of the club could not go into Panama to revive memories of the old " Chapel " the meeting was comparatively dry.

Those present were Witmer, '08, Brooks, '11, Bolton, '16, True, '11, Niles, '17, Green, '16, Grimes, '08, Butters, '01, Raymond, '16, Lieber, '16.

Any Tech men passing through Panama are earnestly urged to call up the secretary, W. F. Grimes, '08, at Balboa 209 and make themselves known. A meeting will be arranged if there is any possibility at all of the traveler staying as long as a day or two.— W. F. Grimes, Jr., '08, Secretary, Balboa Heights, Canal Zone.

PHILADELPHIA—TECHNOLOGY CLUB OF PHILADELPHIA.—On Saturday afternoon, June 7, we held our annual Field Day at the Wenonah Military Academy, Wenonah, New Jersey. The day was a scorcher which probably contributed to the very large attendance. Including wives, sweethearts and Techlets, there were about eighty of us all told.

The afternoon was spent at the Athletic Field and in the baseball game and relay races all the boys were apparently in their old time form. There were also some spectacular contests by the ladies, including a wood-sawing contest, the winner of which was Mrs. D. K. Bullens.

There was a goodly turnout, but Alden Walker, Tech 1939, deserved the prize for being the youngest. He got it in the form of a silver napkin ring, which, incidentally, apparently did not appeal to him nearly so much as the cotton batting in the box in which it was packed. He finally did consent, however, to hold it long enough to have his picture taken.

Although this was the first time in twelve years that Field Day has been held anywhere but at the Woodbury Country Club, the general consensus of opinion was that the Wenonah Military Academy was a most excellent substitute. Field Day ends our activities of the year until the fall.—Marshall B. Dalton, '15, Secretary, Liberty Mutual Insurance Co., 22 South 15th Street, Philadelphia, Pa.

PORTLAND, ME.—THE TECHNOLOGY ASSOCIATION OF MAINE.—Twenty-eight members of the Technology Club of Maine met at the Falmouth Hotel, Portland, on the evening of March 24. Professor A. E. Kennelly had kindly consented to be present and gave a very interesting talk. Mr. F. W. Freeman, '01, demonstrated his very marked ability in the drawing of caricatures. The meeting was very enthusiastic and it was the general opinion that the Maine Club would continue its meetings at more frequent intervals and that a large attendance was assured.—J. A. Warren, '91, Secretary, Cumberland Mills, Me.

URBANA—TECHNOLOGY CLUB OF THE UNIVERSITY OF ILLINOIS.—The Tech men and women at the University of Illinois meet at noon on the second Saturday of each month for lunch at the University Club. During the war we formed an alliance with the Worcester Tech alumni here at the University which has been so satisfactory that we shall probably continue to hold joint meetings with the alumni of our sister institute.

Since the first of the year we have lost our former secretary, Professor E. A. Holbrook, '04, who has gone to Washington as acting Chief Mining Engineer of the Bureau of Mines. In the meantime we have gained Capt. H. E. Babbitt, '11, who was in France for more than a year in the Advanced Section, Service of Supplies, and who had a wide experience in the Divisional Training Areas.

A detailed account of Babbitt's exploits will be found elsewhere in this issue under " News from the Classes."

Along with Babbitt came Lieut. H. F. Ferguson, '12, who was engaged in the same service in France. In fact, we can claim still another overseas man in Capt. Paul Hansen, '02, as one of our former members here at Illinois. Hansen likewise was in the A. S., S. O. S., and although he is now back in this country we have not yet seen him at Illinois.

Dr. E. W. Washburn, '05, divides his time between the National Research Council in Washington and the Department of Ceramic Engineering here at the University.

Professor F. H. Newell, '85, has recently been elected president of the young and rapidly growing American Association of Engineers, succeeding in this position Mr. W. H. Finley, Chief Engineer of the Chicago and North Western Railroad. The association is giving special attention to the economic problems of the engineers, to questions of salary, wages, conditions of employment and everything which affects the engineer as a man and citizen; leaving to the older societies the more technical questions in which they have already made a notable success. The applications for membership in this association have been coming in at the rate of a thousand a month and Newell as president will have his hands full in keeping up with the demands for conferences on the innumerable questions arising in all parts of the country. He is planning to visit the principal centers where engineers are employed and to give special attention to the men in public employ, Federal, State, county and municipal, including engineering educators, who are among the poorest paid members of the profession.

The club is rather proud of the fact that every one of its members took some part in wartime activities, including its only woman member, Miss Isabel Bevier, head of the Department of Household Science. Miss Bevier's work in the Food Administration in Washington was probably as effective as that done by any of us who did not go overseas.—ARTHUR C. WILLARD, Secretary, University of Illinois, Urbana, Ill.

BOOK REVIEWS

The Letters of Dinsmore Ely, '18, One Who Served. A. C. McClurg and Co., Chicago, 1919.

Probably no Technology man in the war had his name made known to so great a number of people at large as did Dinsmore Ely, '18. He and he alone was quoted in Congress, in the press, editorialized about, used to stir the pulses in Liberty Loan advertisements—gained, in a word, a kind of immortality comparable a little to Rupert Brooks' and Major Whittlesy's. And yet Dinsmore Ely did nothing that thousands of boys of his age did not do. He never saw active air fighting; he died, as so many did, from an accident. Many Tech men accomplished more than he in the war; he alone gained such a fame.

This volume of letters tells the questioner why he gained his glory. This volume is an everlasting testimony that the pen is mighty, perhaps mightier than the sword and the machine. Dinsmore Ely had the gift of literature. Years might have made him a good engineer, but a native talent and a great opportunity made him a phrase-maker, whose phrases will not readily be forgotten. " Like a Liberty Bond, it is an investment and not a loss when a man died for his country." These words—the genuine literary quality of them—were no accident. Every letter now published, written to his people at home, shows that. They are undoubtedly the best writing that any Technology man connected with the war has produced. They stand in the front rank with all that college men have written. And so this boy, who seemed to have done so little, has really done so much, so much more than his friends and college mates, living and dead, who worked and fought and lived as sincerely—but whose lips were sealed, who had not the gift of speech.

The letters are charming—boyish, exuberant, vivid, picturesque, often poetic in the best sense. He saw clearly and he thought about what he saw. His accounts of his practice flights have seldom been bettered, even by professional writers, for pure sense of actuality. He saw the French people, too, and he loved and appreciated them—as so few of our Americans have done. And in his last letter, written when his death was quick upon him, it must have been some little touch of prophecy, some " feel " of the future, that made him end with his phrase which already seems to have taken on a little of the glory and immortality of Rupert Brooks' sonnet and Foch's message at the Marne.

Technology produces little literature, it makes few phrases. It would be better known, greater, more useful to the world, if it did—if its men who did things well could tell about them as well. They leave that to a few men like Dinsmore Ely—and Dinsmore Ely thereby becomes to all the rest of the world the symbol, the vivid, speaking symbol of what all his efficient, tongue-tied brothers are worth.

R. E. R.

With "E" of the First Gas: by Private Robert B. MacMullin, at present an undergraduate of the Institute. Privately printed.

A very interesting book, written by Mr. MacMullin not so much for the public as for his company mates in the First Gas and Flame Regiment, and therefore full of all the homely touches, the personal bits, the recollection of well remembered little things that makes a war book vivid and real, different from the usual set report.

The book contains not only this personal day-by-day account of the troubles of the company in training and their belated arrival in France and their few engagements, but it also has a concise, rapid, non-technical description of the work of that branch of the service, which is the best the reviewer has seen. It also contains drawings by MacMullin, verses from his pen, and some interesting photographs. All in all, it is well worth reading. It may be procured from Mr. MacMullin himself, in care of this magazine. We cannot help quoting, to give the flavor of the book, the author's verses written in Virginia during the long training months:

"THE GAS FLAME"

Ain't it a shame, ye boys 'at came
At the call o' the trumpet ter fight the game
O' War an' Death in our country's name,
And joined the famous " Gas and Flame,"
Ter have ter sweat in Virginy's sun
A-wastin' time when the War ain't won,
While our pards is fightin' like sons-o'-guns
Across the Pond ter halt the Hun?

Talk o' blood an' iron, an' sniper's pie—
Why, the most we do is swat the fly,
An' bunk fatigue in a canvas sty
With a 'skito bar fer a lowly sky.
Now what the Hell in the summer time
Is the good uv an O. D. woolen blouse
That swathes yer up like a bloomin' louse
When the mercury's out fer a record climb?

An' three lectures a week on etiquette,
While strategy's not been thought uv yet;
An' buryin' the food yer haven't et,
A-starving the pigs an' the animal pets.
Oh, they's chlorine and phosgene and mustard oil,
But I guess it ain't accordin' ter Hoyle,
Fer the issuin' gas from the Colonel's post
Is what we have ter contend with most.

I guess it's enough ter make yer sore,
This naggin' an' raggin' an' laggin' some more,
An' drillin' a man till he's stale before
He gets his chance ter fight in the War.
Now if it's true, as the officers claim,
That ter-morrer's the day the " Gas an' Flame "
Pack up fer France,—why ain't it a shame
It's ALWAYS ter-morrer,—an' who's ter blame?

PRIV. ROBERT BURNS MACMULLIN.

FORT MYER, VA.

THE COLLEGES IN WAR TIMES AND AFTER, by Parke Rexford Kolbe. New York: D. Appleton and Co.

Any one who is interested in what the colleges as colleges did in war work will be interested in this full, carefully compiled and illustrated work. The author is president of the University of Akron and in government service during the war. The part Technology played is touched on, not as fully as we might wish, but considering the great scope of the work and the number of collegiate institutions in America, pretty fairly adequately.

CAMION CARTOONS, by Kirkland H. Day, '17, IV. Boston: Marshall Jones and Co.

Another Tech man has set out to conquer a new field in the literature of the war, new, that is, to Technology men. A bit like "Dere Mable," a bit like Ring Lardner's letters home from "Al," yet it differs enough to make it well worth reading. The letters and accompanying sketches were written home with no thought of publication, and therefore miss happily that strained and often artificial humor which betrays a professional funny man at the front. The pictures are perhaps the best part of the book, which is rightly called "Cartoons." They deal with all the humorous little anxieties and megrims and desires of the man in service, his wish to go home, his delight in presents, the weariness of routine, the curse of top sergeants, the lure of French wine, French girls—everything except French tobacco. Any one who remembers Day's humorous drawings in Technique and the Woopgaroo and the Voodoo will want a copy of the book.

BUSINESS LAW FOR ENGINEERS, by Calvin Francis Allen, Professor of Railroad Engineering, Massachusetts Institute of Technology. McGraw, $3.

The book is divided into two parts, one entitled "The elements of law for engineers" and the second called "Contract letting." The contract section is quite similar to that in other books of this type. The first section, however, on elementary law, is very much clearer and more definitely stated than is usually the case with legal texts written for the benefit of the engineering profession. The chapters take up not only those sections of elementary law which are obviously applicable to engineering, but others of the apparently less related subjects which, however, are shown to bear upon engineering work. The chapter headings, for instance, are: Evidence, Contracts, Torts, Equity, Real Property, Corporations, Agencies, Master and Servant, Sales, Negotiable Instruments, Railroads, The Engineer's Legal Relations With Others. The author is professor of railroad engineering in the Massachusetts Institute of Technology.

A convenient and useful compilation, giving essentials condensed or elaborated when necessary. Part two is especially good in its suggestions for the advertisement, bidding, uniform contract form with alternative suggestions.

The book seems very complete and goes well into detail without, however, being full of legal technicality. The layman can easily grasp its contents.

Throughout the book a remarkably simple and clear system of arrangement is used, and the value is enhanced by well-thought-out typography. Apparently every effort has been made to leave out extraneous matter such as is common in legal books, for, although Professor Allen is a lawyer, he is primarily an engineer.— ENGINEERING NEWS RECORD.

Applied Mechanics, by Charles E. Fuller, S. B., and William A. Johnston, S. B., Professors of Theoretical and Applied Mechanics, Massachusetts Institute of Technology. Vol. II; Strength of Materials. New York: John Wiley & Sons, Inc. London: Chapman & Hall, Ltd. Cloth. 6 x 9 in.; pp. 556, illustrated; $3.75 net postpaid.

Considering the fact that very little space is devoted to discussion of tests or the physical properties of materials of engineering, and that centers of gravity and moments of inertia are not included, this volume of five hundred and fifty-six pages seems unnecessarily large. In part this is due to the inclusion, at the end of each chapter, of a large number of illustrative problems, which are generally most excellent. The methods of the calculus have been employed throughout, perhaps to a greater extent than is customary, and mathematical refinements of theoretical calculation of stresses are given which are sometimes unwarranted by the assumptions made in the premises as to the properties of the materials and the conditions met with in structures. It should be noted that the authors state in the preface, "As preparation the student should have a knowledge of differential and integral calculus, the principles of statics and dynamics, and the methods of determining the centers of gravity and moments of inertia of areas and solids."

The first chapter is devoted to a discussion of the physical properties of materials, but very little is given on the results of tests. It is followed by a chapter on analysis of stress and strain, a theoretical discussion of the relations of stress intensities acting on a particle in various directions, and including the ellipse of stress. Chapters on uniform stress and uniformly varying stress and stresses in beams give the ordinary theory of flexure. In the discussion of riveted joints no mention is made of the fact that in a riveted joint the friction is the principal resisting medium and that in good work the frictional resistance between the plates is seldom overcome. The chapter on the general theory of flexure includes beams with unsymmetrical cross-sections, acted upon by oblique loads.

Combined stresses, Chapter VII, might better be discussed after Chapter IX, on columns, and should include the article in that chapter which treats of the strut or tie subjected to combined axial and lateral loading. The treatment in Chapter VII is only approximate, neglecting the effect of the deflection of the member, and might be omitted without loss.

In the chapter on arches and catenaries, after giving the equations for the reactions of arches with two hinges and without hinges, expressed in the form of integrals, the authors develop at great length the reactions for arches of uniform cross-section in which the axis is the arc of a circle. This may be good mental gymnastics for the student, but as these conditions are almost never met with in practice, and seldom attempted, it seems that the work would have been much more valuable if the axis had been made parabolic and the section variable, as in the usual case.

The last chapter, treating of reinforced-concrete beams and columns, contains the derivation of the usual formulas for simple beams, T-beams and columns, based on the straight-line assumption. The system of notation is fairly uniform throughout and conforms in the main to current usage. It would be a great help in using the book as a reference if a table of notation were given to obviate the necessity of searching through the text for the meaning of a letter or symbol.

As a text-book for class instruction, this new work may be satisfactory if supplemented with data and lectures on tests of materials, but as a reference book for the practicing engineer it does not promise to be of any great value. —Clyde T. Morris, Civil Engineering Department, Ohio State University, Columbus, Ohio.

Gas Mask Absorbents, by Arthur B. Lamb, '02, Robert E. Wilson, N. K. Cheney. Presented at meeting of American Electrochemical Society, New York, April, 1919.

This article gives a bird's-eye view of all the work done under the auspices of the Chemical Warfare Service on the development of absorbents for gas masks. The peculiar requirements of gas mask absorbents are discussed in detail, and the reasons for the use of a mixture of charcoal and soda lime are pointed out.

The use of charcoal as an absorbent is discussed in great detail, taking up the effect of different variables (temperature, pressure, other gases, etc.) on absorption by charcoal, the chemical action of charcoal, the structure of charcoal, and the preparation of active charcoal. Tables are given comparing the efficiency of charcoal made from different sorts of wood and also those used by the different belligerent nations.

The charcoal made by the United States at the close of the war was several times as efficient as that used by any other country.

A similar discussion is given of the soda lime, which is the other absorbent used in the gas mask canister, in which the function of each of the five different components in the soda lime is pointed out, its behavior in the canister discussed and suggestions made as to the modifications of this soda lime for general industrial purposes. The soda lime is also shown to be much superior to the corresponding chemical absorbents of the other belligerent nations. — Prof. Robert E. Wilson, Department of Chemistry, Major Chemical Warfare Service. May 17, 1919.

Text-book of Advanced Machine Work, prepared for students in technical, manual training and trade schools, and for the apprentice and machinist in the shop. Edition 4, revised and enlarged. R. H. Smith, Massachusetts Institute of Technology. 648 pp. Industrial Education Book Co. $3.

New edition of one of the very best books on machine shop practice. Valuable to teachers of technical and industrial education and to operators of machine tools. The matter is presented in a practical manner and exceptionally well illustrated with line drawings.

Author writes from many years' teaching experience in the Massachusetts Institute of Technology.

History of Chemistry, by Forris Jewett Moore. (International Chemical Service.) Illustrated, $2.50. McGraw.

"The aim," Professor Moore says, "has been to emphasize only those facts and influences which have contributed to make the science what it is today." The last two chapters, which respectively trace the rise of physical chemistry and set forth, though briefly, the present state of knowledge of radio-active substances and the influence of such new knowledge on conceptions of the atomic theory, bring the story down to the present day. The matter includes within the space of two hundred and seventy-one octavo pages an account of chemical ideas from the times of the Greek philosophers down to the latest conclusions concerning the elements from X-ray spectra and atomic numbers. The book is based on talks to the author's classes at the Massachusetts Institute of Technology, where he is professor of organic chemistry. Illustrated with forty-six portraits of leaders in chemical research.

The book is written in a brisk and lively style. The illustrations are all well meant, and many are interesting, but the portraits given are of very unequal merit, and some of them are, to speak frankly, quite bad.— Book Review Digest, White Plains, N. Y.

NEWS FROM THE CLASSES

1868

Robert H. Richards, Secretary, 32 Eliot Street, Jamaica Plain, Mass.

The secretary went to the meeting of the A. I. M. M. E. in New York in February and while there he met quite a large number of Technology men who are all filling their places in a fine way. In March he had a bad cold that held on for nearly a month and he and Mrs. Richards and Miss Jameson, the latter having a bad cold also, made the trip to Florida. There they made Jacksonville their headquarters and from there visited St. Augustine, Pablo Beach and Atlantic Beach, and Mandarin on the St. John's River. On the voyage down they saw the sea turtles in the Gulf Stream and in Florida they heard the story of how the sea turtles come up the small rivers, crawl out on the sand, dig a hole and lay two hundred to three hundred eggs, and then go back to the sea.

They saw something of the orange blossoms and the oranges on the tree at the same time. They saw one of the alligator farms with one alligator fourteen feet long whose age by computation was eight hundred years, and they saw the thousands of little alligators that had just been hatched out from eggs. It appears that the alligator farm realizes its profit more by the sale of the alligator skins than from the visitors, and the showman pointed out the different pens, saying " the skins from that pen are suitable for making gripsacks, and from the other, suitable for purses and small handbags " and so on through the list.

They also saw the ostrich farm and the trained ostrich that was put through the various stunts of hauling a buggy, and of being ridden after the fashion of horseback. They heard the tale of the marital relations of the ostriches, which are said to be remarkably constant. The husband and wife are always faithful to each other, but there happened to have been the day before we arrived a falling out between a husband and wife and the husband had kicked the wife out of the pen, so that the wife was out in the path where the visitors go. As far as could be made out, they were making up their quarrel at the time of the visit and were talking to each other over the fence.

They heard one story about an alligator which illustrates the extraordinary quickness of these apparently slow-moving monsters. There is a park in front of the Windsor Hotel which has a pool in it and a great big alligator. At the time of the story the alligator had crawled out and was up against the fence which surrounded the area. A lady brought her little dog out to see the alligator and she unwisely, as it appeared, lifted the dog up over the alligator's head, and he wriggled out of her hands, and before he reached the ground he was down the alligator's throat.

Nathaniel W. Appleton writes the following concerning himself and family, under date of March 20:

> My brother's wife, Mrs. William C. Appleton, returned from severe work among the French and American wounded in France. For over a year, day and night among the most seriously wounded men, she did the work of utmost unselfishness. She went across for the American Fund for French Wounded, but whilst in France worked also for the Red Cross Society.
>
> Five days after her return she died from cerebro-spinal meningitis.
>
> In France at the same time was my brother's only boy, W. Channing Appleton.

He was an aviator and at the end of the war he came home from the places of great danger, without a wound or sickness.

I was too old to go to the war, could not have stood camp life or the marches or the trenches, but I told the head men of the town I live in, that if there was any place where I could work in and be a help to the United States near home to call on me. I practiced rifle shooting, so that if in need of me I could at least shoot and hit the mark at a long distance.

February 23 my sister's son, Henry Appleton Knowles, thirty-five years old, died in his sleep. He had a few months before returned from France, where he worked for the Red Cross among the wounded and crippled soldiers, where, never shirking his duties, his health broke down and he had to come back to Boston.

These people perhaps you have never heard of, but they represent a very large class of heroes of America, aye, and of other countries.

Kindness, thoughtfulness, tenderness, love, these are the things that uplift the people of all worlds, that show the true religion, that make lasting happiness.

I am glad that those of the class that met at the class dinner had a good time and found pleasant memories to talk about.

In a day or two I shall be at what is called Mt. Lebanon, the place I own, two and a half miles from Hollis Street, East Pepperell.

1870

Charles R. Cross, Secretary, 100 Upland Road, Brookline, Mass.

The secretary of the class has been elected president of the Elizabeth Thompson Science Fund.

The present is also the twenty-second year of his service as chairman of the Rumford Committee of American Academy of Arts and Sciences.

1872

C. Frank Allen, Secretary, 88 Montview Street, West Roxbury, Mass.

Edgar Upton is farming again, having cut loose from the Bureau of Standards at Washington, where he did good service during the war. He is at St. Thomas' Mission, Mill Spring, North Carolina, in " quasi settlement work " among the mountains. He has charge of some one hundred and twenty-five acres which he is to develop along educational lines. Forty acres under tillage. He has acquired a leveling instrument and a text-book on surveying to help in his work. He is temperamentally of the type to fit in with these people, of whom he says, " The people are splendid, given half a chance, and so charmingly warm-hearted and polite that it is more than a pleasure to help them in any way."

Walter Shepard has retired; the following extract from the " Springfield Republican " gives the essential facts:

> Boston, March 30—After forty-four years of continuous service in the engineering department of the Boston and Albany railroad, Walter Shepard goes on the pension list tomorrow, having reached the retirement age of seventy years on March 1 last.
>
> Mr. Shepard was born March 1, 1849, in Dorchester, when it was a separate town. He was educated in the Dorchester grammar and high schools and the Boston Latin School and was graduated from Harvard University in the class of 1870, having for one of his classmates the late Gov. Robert Wolcott. He then attended the Massa-

chusetts Institute of Technology, from which he was graduated in 1872, and in June of that year he entered the employ of the Boston and Albany railroad as an engineer's assistant. For a short time he was employed in the Brookline water works, in the engineering department, but returned to the service of the Boston and Albany railroad on March 25, 1875, and has been continuously in the employ of that railroad since that date, a period of forty-four consecutive years.

He was promoted to division engineer in April, 1882, was made assistant chief engineer in December, 1886, and became chief engineer in November, 1891. He served as chief engineer until May 1, 1908, since which time he has continued in the service of the road as consulting engineer. It was under the direction of Mr. Shepard that the work of lowering the tracks through the Newtons was consummated, and he directed the building and construction of many important bridges and structures now in service on the road.

He lives at 79 Bloomfield Street, Dorchester.

The secretary has put out the second edition of his book on "Business Law for Engineers," which seems to be catching hold properly now that the war is over.

1873

SAMUEL E. TINKHAM, Secretary, The Warren, Roxbury, Mass.

Word has been received that Felton's very able administration of the military railway organization both here and overseas has been recognized by the award of the Distinguished Service Order, he being the first civilian to receive this hitherto purely military order.

Frank N. Brown died at his home in Brooklyn, N. Y., on August 1, 1918. Captain Brown was for many years connected with the Quartermaster's Corps of the United States Army and latterly has been stationed in New York City.

1874

CHARLES F. READ, Secretary, Old State House, Boston, Mass.

No report from the secretary.

The news of the death of George B. Frye, III, of Tacoma, Wash., has recently come to the REVIEW office.

1875

E. A. W. HAMMATT, Secretary, South Orleans, Mass.

The only items of class news which I have heard since the date of the annual meeting are a report of the death of Tom Plimpton, said to have been found dead in his car on February 22, 1919, and a letter from Bill Edes, who has been quite sick and is now waiting for the necessary appropriations before returning to Alaska for the season's work.

Hibbard is at present a gentleman of leisure, having severed his connections with the George Lawley & Son Corporation.

1879

Frank G. Stantial, Secretary,

Care Cochrane Chemical Company, 148 State Street, Boston, Mass.

The 1919 meeting and dinner of the Class of '79 was held at the Walker Memorial, Monday, June 9. Eleven members: Messrs. Barton, Cabot, Cutler, Garratt, Gooding, Haseltine, Howe, Little, Sargent, Smith and Stantial were present. There was a marked absence of the war feeling so pronounced at the previous meeting and the old Sunday School jokes and stories passed around the table as in days of yore. Dame Nature furnished the usual storm with electrical accompaniment.

The hour before dinner was spent in wandering about the Memorial and dormitories and noting the difference between the old and new ways of raising men. A new little bit of rhyme wafted in from Pittsburg:

I'd like to see the fellows
And hear Sargent work his bellows
On Phil Little's song,
But, like the road to Tipperary
When the Fates are contrary
The trip's too long.

W. H. R.

The song went all right, the dinner went all right and the glass contained substance in Gooding's package functioned properly. No business was transacted except the election of officers: President, Charles S. Goodwin; vice-president, George F. Blake; secretary, Frank G. Stantial; business committee, Henry G. Hall and F. L. Smith.

A special student of '79, Miss Laura B. White, died on May 21, 1919.

Maj. Harry M. Montgomery is back on the job as city engineer of Evanston, Ill. He was discharged from service February 15, 1919.

1880

George H. Barton, Secretary, 89 Trowbridge Street, Cambridge, Mass.

I should be glad to keep the class of '80 on the map, were there any possibility of doing so, in every issue of the Review. I have really given up sending out notices of any kind to the class members who still survive. As far as graduates are concerned just fifty per cent are dead, the remaining fifty per cent being alive so far as I know. Once in a while I run across Hamilton or Miller, both of whom are in Boston, but neither has the least interest in the class or in Tech so far as I can learn in talking with them. I have tried in vain to get them out to any Tech functions. Chase is still in Denver, Colo., and whenever I hear from him I give his data to the Review. I am still in charge of the Teachers' School of Science, having desk room in the Natural History Building, Boston, as that is the normal office of the school. My work in the school is carried on in the Rotch Building at Harvard University. In spite of the war conditions of the last few years the school has kept up well and all its departments have been well attended.

On June 30 I start for a trip to Alaska, taking a party of eleven or more to study the geology of the country and places on the way. We stop at Banff, Lake Louise and the Illecillewaet Glacier on the way. In Alaska we go as far as over the White Pass and into the Lake Atlin region. On the return trip we visit Mount Rainier, Portland, Ore., with its beautiful scenic highway up the Columbia River; spend five days in the Yellowstone Park; visit the Garden of the Gods and Pike's Peak; and finally end with a day at Niagara.

My son, Donald C. Barton, Ph.D., H. U., and Sp. '11 at Tech, has just arrived home this morning after nearly two years in France and Germany. He served as meteorologist in the Signal Corps with the final rank of M. S. E. My daughter, Radcliffe '14, who was in the Ordnance Department at Washington till after the armistice, is now in Fall River with her husband, Harold F. Eastman, formerly lieutenant in Aviation, and now back in his old position with Stone & Webster.

1881

Frank E. Came, Secretary, 17 Metcalfe Apartments, Westmount, Montreal, P. Q.

Frank H. Briggs, Assistant Secretary, Hotel Puritan, Boston, Mass.

Zimmermann has been on a big job since 1911, building a $10,000,000 penitentiary for the State of Illinois. In 1916 he took his son and son-in-law into partnership, "and therefore hanging up the harness the greater part of the time—only taking hold of the rudder occasionally—have leisure to travel, play, read, write, study, etc.—and F. H. R. M."

1883

Harvey S. Chase, Secretary, 84 State Street, Boston, Mass.

"No notes"! No interest. No interest. No notes! Figuring war profits taxes has absorbed entire attention of '83, apparently! Not a whimper from any on 'em.

1884

Harry W. Tyler, Secretary, M. I. T., Cambridge, Mass.

Thirty-Fifth Anniversary Reunion (1919)

Committee: Messrs. Bridgman, Dearborn and Gill.

Copy of preliminary notice was sent out in March to members of the class by committee, with return postal cards. A second notice was sent May 23. Hotel booklets sent at later dates to those expected to attend.

Thursday, June 19, Walker Memorial, 1 p.m.

Present: Appleton, Bridgman and Mrs. Bridgman, Coburn and Mrs. Coburn, Dearborn, Fitch, Gill, Holder, Hooker and Mrs. Hooker, Lyle and Mrs. Lyle, Prescott. Puffer. Tyler and Mrs. Tyler. Ward. A. W. Whitney and Mrs. Whitney and W. M. Whitney.

In the afternoon Whitney took the distant members, his namesakes and the Hookers for a drive to Concord and Lexington. The others occupied themselves in an inspection of the Walker Memorial and in a visit to the main Institute building, paying their respects incidentally to Professor Cross.

In the evening, twelve attended the Pop Concert at Symphony Hall. Appleton, Bridgman and Mrs. Bridgman, Coburn and Mrs. Coburn, Dearborn, A. W. Whitney and Mrs. Whitney, W. M. Whitney and daughter, Tyler and Mrs. Tyler.

Friday, June 20. Ten reported at the 10.45 train for Gloucester, where Colonel and Mrs. Lyle had preceded them the night before. Six more followed in the afternoon. The day was showery but the afternoon was interestingly spent in inspecting two of the fish-packing establishments of the Gorton Pew Company, where the class were courteously received by Mr. Gamage, the superintendent, and several Technology graduates employed there. The processes of dissection, flaying and elimination of bones, also the mechanical sealing of cans, were observed with much interest, and the somewhat diversified aromas of the establishment did not prove insuperable obstacles to enjoying the subsequent meal at the Thorwald. On the way back to the hotel the company were graciously received by the father and sister of Dearborn at their summer home, situated on a high knoll surrounded by luxuriant shrubbery.

The following twenty were present at the dinner: Appleton, Bridgman and Mrs. Bridgman, Coburn and son, Dearborn, Doane, Fitch and Mrs. Fitch, Gill, Lyle and Mrs. Lyle, Puffer, Stuart, Tyler and Mrs. Tyler, A. W. Whitney and Mrs. Whitney, W. M. Whitney and W. A. Whitney. After a stroll on the beach the company gathered in the hotel parlor for a so-called business meeting, at which all parliamentary rules were shamefully violated and the intolerable political methods characteristic of the present administration were ruthlessly employed (no reference to Atlantic City is intended). Interesting and very welcome letters were read from the following absent members: French, Jarvis, Otis, Pratt, Boardman, Bunce, Bardwell, Bonillas, du Pont, Johnson, Newell, Rich and T. W. Robinson.

The following little poem from a member of the staff of the Thorwald was read with much appreciation:

A REUNION

Linking together the old and the new
Bringing old friendships back into view,
Scanning the miles that have stretched out between,
Days when no gray hairs on heads could be seen.

Linking the friendships of long, long ago,
Into the life that the older years know,
Forgetting the toils and the struggles they've met,
And almost believing they're thoughtless boys yet.

Noting the old-time gestures they knew,
Recalling the jokes and the scrapes they went through,
Memories discarding all save the one thought:
"What solid foundation for life old Tech wrought!"

Parting—they feel that their youth's been renewed,
As the dear old-time fellows these scenes have reviewed.
Voting to come to the Thorwald next year,
Knowing the visit will make for good cheer.

Bridgman, as chairman of the committee, gave a very clever monologue on the League of Nations.

SATURDAY, JUNE 21. Eighteen of the party under Dearborn's escort made the beautiful trip around Cape Ann by trolley. The day was fine and there was opportunity for a short stay in Rockport, with a photograph by Fitch.

After luncheon most of the party found themselves obliged to come back to town by various trains.

Du Pont has recently received two more distinctions: one his election as president of the Alumni Association, in succession to Mr. Henry A. Morss ('93); the other, his appointment, by Police Commissioner Enright of New York City, as Special Deputy Police Commissioner for the Borough of Queens.

The secretary's attention has also been called to an interesting illustrated article in the " American Magazine " in November, 1918, " Are You a Job-Holder or a Result-Getter — A talk with General du Pont about the kind of men he picks for big jobs."

The secretary has received an interesting pamphlet from C. S. Robinson, vice-president of the Youngstown Sheet and Tube Company, on " Representation for Labor." The pamphlet discusses the plan of the Youngstown Sheet and Tube Company aiming " to provide effective communication and means of contact between the management and the men on matters pertaining to industrial relations, and to insure justice, maintain tranquility, and promote the common welfare."

George E. Claflin, a vice-president of the Electric Bond and Share Company, died suddenly April 18 at Atlantic City, where he had gone for the Easter holidays. Mr. Claflin was a pioneer in the electric light and power industry. He was born in Providence, R. I., April 4, 1866, and was graduated from the Massachusetts Institute of Technology in 1888. He entered the service of the Westinghouse Electric and Manufacturing Company, and was connected with some of the earliest electric generating stations in the country. He then helped to organize the Franklin Electric Company, of Kansas City, Mo., which built and equipped electric light plants throughout the Middle West. He was later a member of the firm of Lewis & Claflin, Consulting Engineers, of Providence, R. I. In 1904 Mr. Claflin became associated with the United Electric Securities Company of Boston, and in 1913 he was elected a vice-president of the Electric Bond and Share Company.

Lieut-Col. Benjamin W. Guppy, who has returned to his old position as engineer of structures on the Boston & Maine Railroad, after serving for two years in Europe, was the guest and speaker, April 22, at the monthly meeting of the Traffic Club of New England at the Copley-Plaza. Colonel Guppy spoke on " Railroad Construction on the Western Front." He is a graduate of the Officers' Training School at Plattsburg and was commissioned a major when the War Department organized an operating regiment from among the railroads of New England. As major, he commanded one of the battalions. His command was brigaded with the British Expeditionary Forces and during his service he won advancement to the rank of lieutenant-colonel. Seventeen months of his foreign service were with the 14th Engineers, and the remainder with the Service of Supplies.

1887

EDWARD G. THOMAS, Secretary, 213 Floyd Street, Toledo, Ohio

Thirty-two years looking ahead in 1887 seemed almost an unnecessarily long span of life, but look backward from 1919 and our student days seem but a short time ago. So when the call came for the boys to gather at the old spot—Young's—for our annual dinner, the response was immediate and universal. Thirty men came together to renew old friendships, talk of old times and detail the records of late years. There were Patterson, Spaulding, H. S. Adams, W. A. Whitney, Carter, Kendall, Nutter, Solomon, Tripp, Gay, Very, Taintor, Fish, Sever, Hobart, Lane, H. D. Sears, Hathaway, Kirkham, A. L. Cushing, Mulliken, Fred Thomas, Hildreth, Merrill, Brett, Carleton, Crosby, Brainerd, Bryant and Cameron.

After an old-time regular Young's Hotel dinner, our collection of stereopticon pictures of scenes from 1883 to 1919 was shown, letters and wires from Sturgis, Shortall, Coombs, E. G. Thomas, John Adams, Granger, Whitney, McCall, Barton, Fogg, Cornell, Cooley and Holmes brought the spirit of '87 from the unfortunates who couldn't come, and the stories of war work from those who, in the service or civilian positions, helped to down the Kaiser, made a long evening pass all too quickly. Eighty-seven is much indebted to Taintor for his energy in attending to the affairs of this very successful meeting.

Dr. James W. Greeley is now in Palestine on Red Cross work.

Dr. Fred P. Gulliver passed away February 8 in Philadelphia, of pleurisy and pneumonia.

R. E. Schmidt was appointed last summer a member of a commission to lease existing buildings which could be turned into army hospitals, having carte blanche to spend $15,000,000 if needed. After the armistice was signed the commission was reappointed to arrange for the cancellation of the leases and supervise the necessary financial adjustments.

Granger Whitney spent a year and a half in the coke bureau of the fuel administration in the work of investigating costs and fixing prices. To our dinner he sent the following poem:

COKE

I

The filler on his larry weighs the iron ore and stone,
  The skipman hoists the loaded skip which dumps itself alone;
The keeper stops the tap hole, and the monkey man the notch.
  The helper runs the iron and the engineer is Scotch.
The runner man lifts up the gates to let the metal flow,
  The blower watches everything for it's his job to know
That everything works properly from tapping hole to smoke,
  But he'll never blow the furnace unless you give him coke.

II

There are steel rails and wire fence, solid shot and shrap,
  Ship plates and boiler plates, little guns and big,
Roughing rolls and finishing to bloom and finish up
  Soaking pits for heating and a mixer for the pig.
Dolomite and silica for open hearth and Bessemer,
  Ingot moulds and spiegleisen, checker work and smoke,
Bronze tuyeres and fire brick, iron ore and fluxing stone,
  But you'll never get combustion unless you have the coke.

III

Mining is a job of work and coking is a trade,
  And men have put their minds to it, for there the money's made;
So let the corporation that has seen the business grow
  Have an eye upon the future lest it see the business go.
Forget the dollar of today until the war is won,
  Lest your orders come from Prussia and your boss turn out a Hun;
For if we do not win this war you surely will go broke.
  So forget your little profit and hustle out the coke.

IV

The division superintendent has a trench line to defend;
The track gang are the sappers from terminal to end.
The president's the general and should let his colonels know
That what's good for Pennsylvania is an aid to B. & O.
The dispatcher is the signal man—he surely earns his pay;
The train men are the soldiers and it's theirs to win the day.
But cars will never leave the shop, nor engine turn a stroke
If the miner and the burner don't get out the coal and coke.

V

The battleship's a bulldog; the cruiser is a hound.
The destroyer is a beagle pup that chases all around.
The submarine's a water dog and he's a dirty pup,
And the little trawler waits around to beat the beggar up.
And they all protect the troopship with the lads who do the work.
So, Johnnie in the coal mine, you have no time to shirk,
While your brother's in the trenches you should strike a lusty stroke
For a ship will never leave the ways unless we have the coke.

VI

There are steel rails and wire fence, solid shot and shrap,
Ship plates and boiler plates, little guns and big;
Roughing rolls and finishing to bloom and finish up,
But you'll never fill the mixer up unless you have the pig.
There are dolomite and silica for open hearth and Bessemer,
Ingot moulds and spiegleisen, checker work and smoke,
Bronze tuyeres and fire brick, iron ore and fluxing stone,
But you'll never win this little war without a little coke.

The secretary has learned with deep regret of the death of Fred C. Todd, which occurred during the winter at his home in Baltimore. It is hoped to present a record of his life in the next Review.

O. S. Hussey has been busy as a civilian in the Ordnance Division, War Department, since May, 1918, having in charge the contracts for furnishing heavy field artillery to the army. At present he is preparing a review of the commercial operations connected with the building of these guns as a permanent record for the information of the War Department in the future.

F. D. Carney, formerly general superintendent of the Pennsylvania Steel Company and general metallurgist of the Bethlehem Steel Company, and Lewis B. Lindemuth, formerly assistant superintendent of the Bessemer and Open Hearth Departments of the Pennsylvania Steel Company and superintendent of the Electric Furnace and Crucible Departments of the Bethlehem Steel Company, announce that they have formed the partnership of Carney & Lindemuth, Consulting Engineers and Metallurgists, with offices at 40 Wall Street, New York.

1888

William G. Snow, Secretary, 95 Milk Street, Boston, Mass.

The secretary regrets to be obliged to record the death of our classmate, George E. Claflin, which took place at Atlantic City on April 18. He had been there recuperating, went back for further rest and appeared to be improving until shortly before the end which came suddenly. Claflin was always with us on reunions and class celebrations when possible and his presence at these gatherings will be sorely missed. Claflin was born in Providence, April 4, 1866. While in Technology he was Editor-in-chief of 1888's "Technique" and later was connected with the Technology Quarterly. He served four years as class secretary. On April 18, 1894, he married Miss Susie E. Talbot, who survives him.

His life was an active one. In August, 1888, after graduating from the Department of Electrical Engineering he went to Hartford, Conn., with the Waterhouse Electric Co., bought out later by the Westinghouse Electric Co. In November of that year Claflin went to Pittsburgh from which place he made trips to the South and West, also to Havana, Cuba, inspecting plants, especially those in course of erection. In 1889 he was made district engineer, with headquarters in St. Louis and traveled through the West. He left the Westinghouse Co. in November, 1891, and organized the Franklin Electric Co., with William H. Blood, Jr.,'88. He spent three and a half years in this and installed numerous municipal and lighting plants in Missouri, Iowa, Nebraska, and other places. This company specialized in the erection of electrical fountains.

Early in 1896 the company dissolved and in April of that year the engineering firm of Lewis & Claflin was established at Providence, R. I. The firm was appointed electrical inspectors and experts for the Insurance Association of Providence. From 1900-03 Claflin was engineer and manager in charge of reconstruction of railway, light and power systems of the Asheville (N. C.) Electric Co. In 1904 he became engineer for the United Electric Securities Co. of Boston, and was engaged on investigations and reports of Public Service Corporations. While acting in this capacity he had charge of the construction of the Omaha Electric Light and Power Co., Omaha, Neb.; was director and engineer in charge of construction of the Winona Railway and Light Co., Winona, Minn., and served in a similar manner in connection with the construction of the Jamestown (N. Y.) Light and Power Co.

Claflin's activities continued along these lines and in 1913 he was elected a vice-president of the Electric Bond and Share Co., with headquarters in New York. In this position he was in general charge of the operation of all the electric power, light and gas properties under the management of this company. He was a director and a vice-president among other companies of the American Power and Light Co., the Idaho Power Co., the Lehigh Power Securities Corporation and the Utah Securities Corporation. He was a member of the Bankers, Engineers and Technology Clubs of New York.

The following article was recently published in "The Tech" but very likely escaped the notice of some '88 men, therefore it is reprinted below:

Louis A. Ferguson, vice-president of the Commonwealth Edison Company, Chicago, has just completed thirty years of service with the company and its antecedent companies. Mr. Ferguson has spent his entire business career as a central-station man. Promptly after graduating from Technology he entered the employ of the Chicago Edison Company. After serving in the underground department and in the trouble department, he was assigned to the electrical engineer's office, and in 1890 he became electrical engineer for the company. In 1897 he was appointed general superintendent in charge of all the electrical engineering, construction, operating and contracting of the company. Upon the formation of the Commonwealth Electric Company, Mr. Ferguson was made its general superintendent. In 1902 he was appointed second vice-president of the Commonwealth Electric Company and the Chicago Edison Company. Five years later these companies were consolidated under the name of the Commonwealth Edison Company and Mr. Ferguson was elected second vice-president. In 1914 he was elected vice-president in charge of contract, operating, construction and electrical departments, a position which he still holds. To Mr. Ferguson belongs the credit of being the first central-station engineer in the United States to recommend the system of generating three-phase alternating current for distribution over transmission lines to sub-stations containing rotary converters to transform the energy into direct current for general distribution. He has made three trips to Europe to study engineering development there. One of these investigations of European practice resulted in recommendations to the Chicago Edison Company that it adopt the differential rates now so largely employed. Mr. Ferguson is a past president of the Association of Edison Illuminating Companies, the National Electrical Light Association and the American Institute of Electrical Engineers. During the war he has been a member of the Federal Capital Issues Committee and other war bodies.

Maj. Fred J. Wood has recently been stationed at Camp Devens, Mass.

Col. Sanford E. Thompson who has been with the War Department in Washington in the Ordnance Department has returned to active work in his profession now carried on under the name of The Thompson & Lichtner Co. of Boston and New York, consulting engineers in management, accounting and construction; their New York office at 25 Pine Street is in charge of Maj. Brinton Buckwalter.

Col. George D. Moore of the 20th Infantry, United States Army, is now located in Washington.

Maj. Theodore F. Laist is now in the Karpen Building, Chicago, Ill.

1889

WALTER H. KILHAM, Secretary, 9 Park Street, Boston, Mass.

So important an occasion as the thirtieth anniversary of the entrance of the class into civil life was fittingly observed by twenty-seven members at the Wianno Club, whose luxurious appointments contrasted most favorably with the somewhat rough and ready appointments of previous hostelries which have had the honor of accommodating '89.

The mobilization occurred quietly and without seriously interfering with the public convenience, and twenty-two members gathered around the table on Friday night, the others arriving during Saturday. Weather conditions were perfect, making possible a swim on Saturday morning for all those who had bathing suits. The program, which offered continuous loafing as its main attraction, was studiously followed by most of the guests, though a foursome composed of Bosworth, Hobbs, F. L. Pierce and Williston persisted in a brave attempt at golf, whether for exercise or to justify the very striking and handsome golf costumes which they sported is open to question.

The dinner on Saturday evening was naturally the climax of the whole affair and provided an opportunity for the class to testify to its love and respect for Billy Thurber, the president, by presenting him with a suitably inscribed silver bowl. Billy was overcome by surprise but was able to make it clear that the occasion was also the twenty-fifth anniversary of his marriage, and the bowl, while deeply appreciated for its original purpose would likewise come in very handy as an excuse for his absence from home at that time. Jap Whiting, who made the presentation remarks, asked that Billy bequeath the bowl to his two sons who were in the service in France, one of whom was seriously wounded in saving the life of a soldier, while the other one was awarded the Croix de Guerre for a similar action.

Juddy Wales then awarded citations to each member present, accompanying each with an original verse appropriate to the character and peculiarities of the recipient. This so moved the members that Juddy himself was made the recipient of

Jere Campbell told some very interesting accounts of his experiences in France, as Jere was a major and had charge of construction of docks and handling of material going to the front.

Fiske is now associated with the Automatic Sprinkler Company in Providence.

A letter was read from Major Leeming, who has just returned and is spending the summer at Saranac Lake, New York. He was Chief of Service of Buildings and Grounds in France for the American Expeditionary Forces and had charge of leasing of all land, buildings, docks, etc., and when the Rents, Requisition and Claim Service Department was formed he was made Chief Renting Officer. After the armistice, during November and December, he laid out an area around Le Mans for the billeting of a million soldiers awaiting transportation. In January he was put on the Board of War Damages for the allied countries and was put in charge of the valuation of buildings and lands damaged in France and Belgium. In February he was ordered to Rome to assist the Italian government along the same line.

Ernest Tappan is at Sainte Menehold, France, for the Young Men's Christian Association.

As far as can be ascertained the Class of '91 was represented in the army by the following: Major Campbell, Major Hooper, Major Leeming, Captain Coles, Captain Kimball, Captain Scudder, Lieutenant Henderson.

George A. Campbell reports the arrival of a daughter in his family. Congratulations.—Henry G. Bradley was elected president of the class for the next two years.

1892

GEORGE H. INGRAHAM, Secretary, 2052 Cornell Road, Cleveland, Ohio

CHARLES H. CHASE, Assistant Secretary, Tufts College, Mass.

Capt. Arthur Morton Worthington, Medical Corps, United States Army, is with the Army of Occupation, A. E. F., at Coblenz, on the Rhine.

Frederick L. Francis, an architect, ended his life by inhaling gas at the home of his mother. He had returned from Washington, where he had been engaged in war service, and had since suffered a serious breakdown as a result, it was believed, of overwork. He was forty-nine years of age and leaves a family.

Horace Greeley Lobenstine of 1250 Seminole Avenue, Detroit, Mich., announces for himself and family that by order of the Probate Court of Wayne County, Michigan, he has been authorized to use the English version of his German name, Horace Greeley Preston. Preston graduated from the School of Mechanic Arts in 1888 and from Course IX of the Institute in 1892. After leaving the Institute he became president of the Detroit Leather Specialty Company of Detroit, Mich.

The "American" of New York City, March 5, 1919, announces the appointment of L. K. Sherman to an important post:

> The appointment has been announced by Secretary of Labor Wilson of L. K. Sherman, chief engineer of the housing corporation, to succeed Otto M. Eidlitz as director of the Bureau of Industrial Housing and Transportation, the United States Department of Labor, who recently resigned to resume his private business. His experience for the last twenty-seven years has been as an engineer or executive on construction. His offices are in Chicago.

A letter recently received from H. N. Williams tells of his experiences in France. He says:

> Am now on my way home and tomorrow will be seventeen months in foreign service, the opportunity for which I am very deeply grateful for. Came over as a captain in the 10th Engineers, leaving New York August 1, 1917. Detached to serve with Training Corps September 26, 1917. Was supervisor since that time in very active railway work, having charge of transportation at the quartermaster depot at Geneva. Was transferred to the Inter-Allied Railway Commission, which works directly under orders of Marshal Foch; in December I was sent to Coblenz, Germany, as president of the Coblenz Delegation of the Inter-Allied Railway Commission, having supreme charge of all German railways on the American front, and including the American bridgehead. This, of course, includes all work of blockading Germany as far as the railways were concerned. It was a wonderful experience; I organized the work, being assisted by some very able subordinates. On account of the death of my mother, I requested relief in order to return home for attention to personal matters (it being no longer absolutely necessary to remain). Relief was furnished in January, and after remaining with my successor to help him all I could, I left Coblenz. I had several splendid visits with Capt. W. R. Kales, '92, at Coblenz. He is with the 4th Aero Squadron, well, happy, and working hard. He certainly is one of Uncle Sam's finest officers. Tried to get to see Feland who is in that region but missed connections when in his neighborhood. I did not have a chance for service in the trenches, but tried to do my share and then some, wherever I was stationed.

1893

Frederic H. Fay, Secretary, 308 Boylston Street, Boston, Mass.

George B. Glidden, Assistant Secretary, 551 Tremont Street, Boston, Mass.

No report received from the secretary.

Notice was received May 26, 1919, from the postmaster at New York, that George T. Hanchett, VI, had died recently.

1894

S. C. Prescott, Secretary, M. I. T., Cambridge, Mass.

The quarter centennial celebration of the graduation of the Class of '94 was held from June 19-22 and proved to be a most enjoyable occasion. Fifty men were present at the different events, and while this number is somewhat smaller than had been anticipated from the early replies, it was a very jolly and agreeable company which met to commemorate events of '94.

The first meeting of the class was a luncheon at the Engineers' Club at noon on Thursday, June 19. Here approximately forty men gathered and spent a couple of hours in renewing old acquaintances and in making plans for the succeeding days. Shortly after two o'clock those who were going to East Bay Lodge at Osterville on Cape Cod were assigned to their respective motor cars and, headed by Nathan Cheney, a procession of eleven cars started for the Cape. The cars remained reasonably near together throughout the whole trip until the Cape was approached, when some of the speeders pulled away from the rest and constituted a committee of welcome and reception when the remaining cars arrived. Two or three stops en route were made for the purpose of purchasing strawberries and other refreshments, but the whole company arrived at East Bay Lodge in time for an excellent shore dinner. The evening was spent in reminiscence, kelly pool and music, the class developing extraordinary talent in the rendition of certain songs, the most successful being the Stein Song, and The Long, Long Trail and Till We Meet Again, sung at the same time by dividing the class into two groups.

Friday morning the arrangements for the golf tournament were soon under way and practically all the players in the company were entered as contestants for the class championship. Those who did not play golf devoted the morning to tennis, swimming, and automobiling to near-by points of interest along the Cape. In the afternoon more golf was indulged in by a small group, while the remainder sought success in other means of entertainment. Friday afternoon the company was increased by the addition of about ten more members of the class who were unable to go down on Thursday, and under the leadership of R. S. Weston a distinctly musical evening was enjoyed. Incidentally, there were games of bridge and kelly pool on the side, and the non-singers who, by the way, were few, were a highly edified veranda audience and very generous in their applause.

Saturday morning opened with a before-breakfast swim by a considerable number of those present and immediately after breakfast there was a hegira to the golf links where the class championship was to be played off between W. F. Spalding and A. A. Clement. Spalding proved to be the winner by a score of one up. The afternoon was somewhat interfered with by showers, but these did not seriously mar the day and a rifle competition was held in a field near the hotel. Pistol shooting was also indulged in and in the late afternoon a ball game was played between two picked teams, the Blue and the Gray. The quality of the playing is reflected in the score which, according to the official umpire, was 24 to 23 in favor of the Blue, although the Grays claimed the score was 18 to 12 and some of the Blues were confident that it was 14 to 9 in their own favor.

Group photographs were taken on Friday and also on Saturday by F. W. Lovejoy, who was the chairman of the Photographic Section. The golf tournament was arranged by A. B. Tenney, assisted by Cheney, and the rifle shooting and baseball game were conducted by the secretary.

The class dinner was held on Saturday evening with a total attendance of about thirty-five. A number of those who had been in attendance were obliged to leave earlier to connect with trains for New York and the West, but a very enjoyable dinner was had in spite of the reduced attendance. After the dinner an election of class officers was held in which W. H. Bovey of Minneapolis was elected president until the next reunion; S. C. Prescott was continued as permanent secretary, and Cheney and Claflin were made members of the Executive Committee. Following the election of officers, a number of prizes were given out to the winners of the various events. To N. S. Bean, as the class baby, was presented a nursing bottle filled with milk punch; to W. F. Spalding as the winner of the golf championship, a prize of half a dozen golf balls was given, and to A. A. Clement as the contestant having the best score for eighteen holes in medal play, a second prize of golf balls was presented. Consolation prizes for the highest scores were given to Tom Richards and Duckworth. The first prize for singles in tennis was presented to Day and the prize for doubles to Day and Warren. In the rifle competition Tenney stood at the top with a score of forty-four and received the first prize. To the next ten in order were given distinguished service crosses made of steel and tied with class colors, while to the remaining members of the class leather medals were granted. The man having the lowest score, Piper, received also a special prize. The baseball used in the game and inscribed with the score was presented to Captain Spalding while the members of the team were each given celluloid scorers. The captain of the losing (?) team was presented with a toy ball of beautiful brown and white leather and he was also given a bag of marbles for distribution to the members of his team. A special prize of a toy balloon was given to Day for making the longest hit and another special prize, consisting of a fly swatter, was awarded to Warren for distinguished batting. After the election, the class gathered around the piano and sang numerous songs, including some which had been specially prepared for the occasion.

The reunion has developed a certain amount of latent literary talent, or at least it is making its appearance in the class at this time. Among the contributions are the following special songs which were prepared by members of the class:

TECHNOLOGY FOREVER

By J. W. Kittredge

I

(With apologies to Marching Through Georgia)

Gather back to Boston, boys, we'll sing another song,
Sing it to a name that helps to move the world along,
A name that stands for loyalty and honor high and strong,
Old Technology forever.

Chorus

Hurrah, hurrah, we'll sound the jubilee,
Hurrah, hurrah, the flag that makes you free,
We'll sound the praise and honor of the dear old M. I. T.,
Old Technology forever.

II

We'll gather to the stamping grounds we trod in days of yore,
We'll grasp the hand of friendship we have trusted o'er and o'er,
We'll mark the quad-centennial of the Class of Ninety-Four,
Of Technology forever.

Chorus

III

We've played this wondrous game of life and always played it fair,
We've shown that we can build a name and build it on the square,
And when the final finish comes, we've shown that we'll be there,
Old Technology forever.

Chorus

IV

We'll solve our country's problems as our men of honor should,
We'll turn the songs of ancient strife to loyal brotherhood,
We'll prove the Tech a mighty power for universal good,
Old Technology forever.

Chorus

The secretary also prepared two parodies on popular songs of the day which were apparently appreciated and were adopted as class songs.

TILL WE MEET AGAIN

Here we meet to celebrate anew
Days long past and friendships tried and true.
Raise the flag of gray and blue,
Clasping hands, and then, my comrades,
Ere we part we'll pledge ourselves once more
Loyal e'er to Tech and ninety-four,
To guard their honor evermore,
Till we meet again.

THERE'S A LONG, LONG TRAIL

There's a long, long trail a-winding
Back to the days now long dead,
To Chem. and Math. and English Lit.,
And the old drill shed.
There were then long nights of boning
To get a credit or two,
But we plugged along, and, Ninety-four,
Good old class, here's to you!

There's a long, long trail a-winding
Back to the days of our youth,
When we met at Tech together,
In the search for truth.
There have been long years of working
To make our dreams all come true,
But we've fought the fight, and, Ninety-four,
Good old class, here's to you!

Our old friend, Taber, who has for more than a year been laboring in the Ordnance Department in Washington under various difficulties, sent on a poem which is also here reproduced.

EPITAPH OF A BRANCH HEAD

(A daily report will be required of each person giving a detailed statement of his activities for each day. This report is to be handed in not later than 9.30 on the following morning.)

(Extract from instructions)

There was a faithful " Branch Head " once,
Who worked in Building " B,"
Each day he did a thousand things,
A busy man was he.
And when at last he came to die,
And left for realms above,
He started straight for Heaven's gate,
The land of peace and love.

He knew he'd done his duty well,
Had early worked and late,
And so he surely thought for him
He'd find an open gate.
But good St. Peter barred the way,
And to an alcove led,
And placed a pencil in his hand,
And this is what he said:

" Why think ye that your home is here?
I know ye not at all;
And ere ye walk my golden streets,
Or eat in my mess hall,
Ye'll have to prove that ye are worth
The price I have to pay:
The times are hard and board is high,
And going up each day.

" Just sit ye down before that desk,
And write out one by one,
And tell for every day in life
The good that ye have done.
Ye've got to show the reason why,
And prove to me your worth;
So write in detail everything
Ye did while on the earth."

The Branch Head gasped—he gripped the chair;
He said out, " Let me in,
I've ever been a faithful man,
My life's been free from sin.
And back on earth in Building B
The upper floor, Wing One,
You'll find a million daily sheets
That tell what I have done.

" I wrote them for the Ordnance there,
That every one might see
The things I did for every day,
But 'twas too much for me.
I tried to do some useful work
Each day to fight the Hun,
But almost all my time was spent
In writing what I'd done."

" If that be so," St. Peter said,
" Come in and rest in peace.
Your life was truly Hell enough,
Your troubles now shall cease.
You did your best to do some work,
To have the victory won,
I understand—you couldn't—you
Were writing what you'd done.

" And those who through such trials go
And perish by the way,
Can always find a refuge here—
In peace forever stay.
Your room is there in Martyr's Row—
The Upper Floor, Wing One,
Your epitaph: ' He tried to write
The things that he had done.' "

A number of the men left for Boston immediately after dinner, the remainder waiting over until Sunday when the reunion broke up. It may be regarded as the most successful reunion the class has ever held and all present were enthusiastic about it and already talking about plans for the next one.

The men who were present at one or more of the different functions were: Adams, Bean, Batcheller, Batson, Beardsell, Bovey, Claflin, Clement, Chace, Cheney, Curtis, Crary, Dana, Davis, Day, Duckworth, Ellis, Ferguson, Hopewell, Hunt, Jenny, Kimberly, King, Klipstein, Lawrence, Lowell, Lord, Lacount, Lovejoy, Moore, Marvell, Owen, Phelan, Piper, Pratt, Pollock, Prescott, Patrick, Richards, Ripley, Reynolds, Spalding, Tenney, Taylor, Weston, Warren, Wood and Wheildon. In addition to these members of the class, Mr. George Stetson was present as a guest and admirably entertained us by his musical ability.

Letters of regret were received from the members of the Faculty, Professors Fay, Norris, George, Bailey and Woods, who were made associate members of the class three years ago. All expressed their great appreciation of the invitation and deeply regretted that other engagements would prevent them from attending the reunion.

McKibben, who has for several years been professor of Civil Engineering at Lehigh University, has resigned to become the head of the Department of Civil Engineering at Union College, Schenectady. McKibben has done notable work in connection with the Shipping Board and has recently written for the Lehigh college paper an interesting article on " Why Portugese is the Language of Brazil."

H. H. Johnson is owner and publisher of the " Tacoma Daily Index," the official paper for Pierce County and for the City of Tacoma.—L. S. Greenleaf is vice-president and treasurer of the Manning Abrasure Company of Troy, N. Y.—C. W. Dickey is practicing architecture in Oakland, Cal.—F. A. Schiertz is government chemist, Bureau of Steam Engineering, U. S. N., at Munhall, Pa.—W. V. Brown is manager of the Engineering Societies' Employment Bureau, 29 West 39th Street, New York City.—W. R. Miller is an architect in Portland, Me.—Arthur LaMotte is manager of the Technical Division of the du Pont Company, Wilmington, Del.—C. A. Mead is one of the vice-presidents of the du Pont Company.—D. C. Chaffee has been for the past two years in war service in France, having closed his architectural office in Peoria, Ill., to take up this work.—S. P. Blanc is western manager for the Eureka Fire Hose Manufacturing Company, the Gunwall Fire Alarm Company, and the America-France Fire Engine Company with headquarters in Denver.—E. S. Jenckes is vice-president and general manager of the Joseph Bancroft & Sons Company of Pennsylvania at Reading.—S. H. Thorndike is a member of the firm of Fay, Spofford & Thorndike which had full charge of the engineering of the Boston Army Supply Base, a $25,000,000 shipping and storage terminal built for the army in 1918.—H. R. Batcheller has been investigating the labor situation for the National War Labor Board at Washington.—Russell Sturgis is a captain in the Sanitary Corps and is sanitary officer at Camp Taylor, Ky.—Nathan Cheney is mechanical engineer for the Stone & Webster organization in Boston.—W. C. Peet is president of Peet & Powers, electrical engineers at 70 East 45th Street, New York City.

A. G. Robb is chief of the Robb Engineering Works, Ltd., Amherst, N. S. His company has been engaged since early in the war making shells for the British government and also for the United States government. They have constructed buoys and apparatus for torpedo nets for the protection of Canadian harbors, have built marine engines for the Canadian and other merchant fleets, and also for the French and Canadian governments.

E. B. Waite is a consulting engineer with headquarters, Lock Box 617, Millbury, Mass.—L. R. Moore is assistant inspector of gas for the Commonwealth.—R. H. Ober is captain of Engineers in the United States army with headquarters at Camp Humphreys, Va.—F. L. Stearns is deputy collector of Internal Revenue with an office at the Custom House, New York City.

Mrs. Mabel Warren Sawyer and her two daughters have been very much engaged in war work at the Technology Work Room, her two sons have also been engaged in war work, one in connection with the railroad administration and the other in war garden work with the United States Boys' Working Reserve.

G. W. Sherman, known as the mayor of Junkville, has done remarkable work in the salvage and by-products department of the B. F. Goodrich Company of Akron.—A. W. Tidd is assistant engineer, Board of Estimate and Apportionment, Municipal Building, New York City.—J. C. Kimberly is vice-president of the Kimberly-Clark Company of Neenah, Wis., manufacturers of pulp and paper.—C. C. Whiton has moved from New Bedford to New York where he is superintendent of the Hudson River Day Line.—E. I. Marvell has been very busy in construction work as mill engineer and architect in Fall River.—H. R. Bates is general superintendent of the International Agricultural Corporation.—L. W. Bugbee is factory manager of One Piece Bi-Focal Lens Company, Indianapolis, Ind.

Warren Jenny, who has been absent from Boston for many years, has returned as an accountant in the War Construction Work at Squantum and South Boston.

T. P. Curtis and F. W. Lord, The Lord Electrical Company, have installed a large amount of power and electrical equipment on twenty Ferrys type wood ships for the United States Shipping Board.

G. A. Taber has been engaged as an expert in the Ordnance Department, following the production of heavy artillery and preventing delays and increasing the efficiency in the production of ordnance equipment.

W. H. Bovey is president of the Dunwoody Institute in Minneapolis, where seven thousand men have been trained for the navy and three thousand for the army during the past two years.

E. C. Klipstein is an architect in the Chemical Building, St. Louis.—L. Dana is vice-president and general manager of the Charter Oak Stove and Range Company, St. Louis.—C. G. Abbott has gone to South America to take observations on the eclipse of the sun.—G. R. Beardsell is partner in the following concerns: Gardner & Beardsell Company, W. H. Foss Company, Inc., P. G. Smith Company, Inc., is also director of the Central National Bank of Lynn, the Lynn Mutual Fire Insurance Company and a trustee of the Lynn Five Cents Savings Bank.

J. G. Estey is president of the Estey Organ Company, Brattleboro, Vt.—J. L. Nesbitt is secretary and treasurer of the J. P. Williams Land Company, Tallahassee, Fla.—H. S. Duckworth is resident manager of the Garner Bleachery and Print Works Company, Garnerville, N. Y.—G. L. Mower is electrical engineer with the General Electric at the Pittsfield works.—H. F. Copeland is manager of the White Oil and Petrolatum Division, L. Sonneborn Sons, 262 Pearl Street, New York City.

1895

Wallace C. Brackett, Secretary, 105 Washington Street, Boston, Mass.

The secretary is making a strenuous effort to get " news " from different members of the class, but with indifferent success. Out of letters sent to twelve men, three replies were received; a second letter brought two more, and a telephone message brought one more, or a total of six out of twelve. Only one letter was returned for wrong address, showing that five men received two letters each to which they paid no attention. Can't we better this record? Please answer the secretary's letters at least so that we can know that you are alive.

A communication from Booth, the class president, has just been received and reads as follows:

> It has been found impracticable to hold a class outing this year, but plans are already being made for next year's outing. This will be in celebration of ninety-five's twenty-fifth anniversary, and it is expected to make this outing worthy of the occasion.

Charlie Parker is about to return to his office, having recovered from his recent illness. We shall all be glad to see him around again.

Azel Ames, having been discharged from the service, has returned to his work with the Kerite Wire Company. He writes as follows:

> I was called into service with the Coast Artillery Corps, N. G., N. Y., on June 15, 1917. Drafted into the army of the United States with the same organization as major on August 15, 1917. Served at Fort Wadsworth, New York, from August 21 to December 31. Attended the Coast Artillery School, Fort Monroe, Va., January and February, 1918. Was assigned to the 61st Artillery, C. A. C., at Fort Screven, Georgia, which was the first railroad artillery regiment organized here for the war. This was later turned into an eight-inch motor-drawn howitzer outfit and I was transferred to the 75th Artillery, C. A. C. Was sent on same duty in the South

Atlantic District where I picked up malaria and pleurisy and was in the General Hospital No. 1, N. Y. C., for two months. My regiment (75th) sailed in September (first week) and after convalescence I was transferred to the 41st Artillery, C. A. C., at Fort Monroe. We were to be ready to sail November 15, but naturally didn't.

Have organized, clothed, trained and equipped for overseas three different battalions of heavy artillery, but didn't get over with any of them. Rather rotten luck seeing that I had handled guns up to twelve-inch for the last ten years. Have been back with the Kerite Company since discharge on January 17, 1919.

Am living at 35 Lake Avenue, Yonkers, N. Y.

Faxon writes the following from Washington:

Have been on war work for the government, in a civilian capacity, since December, 1917, with headquarters here in Washington. Until some time after the armistice, I was supervising inspector of ordnance material, the work I was on covering pressed metal parts, including helmets; also machine tools, and all kinds of miscellaneous equipment not otherwise classified. During 1918 my work for the Ordnance Department took me into many manufacturing plants in the East and Middle West.

For several months past I have been with the machine tool section of the Ordnance Salvage Board, the work consisting of special assignments to provide suitable machine tools and other equipment from ordnance surplus for various other government departments. I expect to stay here until two or three immediate jobs are finished and then take up some manufacturing work again.

Have attended a couple of " Tech " picnics here but no other '95 men showed up.

Ben Donham, for many years in Seoul, Korea, finds New York tame; read what he says. Please note also what he says about free lunches for any '95 man.

I am still located at 52 Broadway, New York City, where I have been for the past seven years endeavoring to make a living as a consulting engineer, financial representative and manufacturers' agent.

Business is very dull and I find plenty of time to play golf. Bill Swift lunched with me today and it would give me great pleasure to buy a lunch for any member of the class of '95, who will take the trouble to call at my office about noon and have a chat about old times.

Aside from the fact that I am president of the Board of Education in my home town and I took part in the various drives for Liberty Loans, etc., I seem to have done very little in the way of service toward my fellowmen. As a matter of fact, I find life in this section of the world rather tame after my more exciting experiences in the early years following my graduation from Tech.

I note that it is the intention to attempt to have a '95 reunion at some accessible point this year, and hope you are making progress with it because I would try very hard to be present at what I know would be a most enjoyable occasion.

Dr. " Jack " Dorrance writes that outside of working for the Food Administration in Washington, operating the plant of the Campbell Soup Company in Camden, of which he is president, and exporting about forty-five per cent of its production to Europe, he has done little or nothing.

From a book recently published giving data about prominent men in New Jersey, we find the following, which really describes what he has done:

Dr. John T. Dorrance, president of the Joseph Campbell Co., makers of Campbell's soups, is head of one of the leading food industries of the world, an industry largely of his own creation. Naturally, he is a conspicuous figure in American enterprise.

As a youth he attended Rugby Academy, Philadelphia, then entered the Massachusetts Institute of Technology, the famous " Boston Tech," where he took his B. S. in 1895. Going abroad he studied at the University of Gottingen, Germany, where he graduated with the degree of Ph.D. in 1897.

Returning to America he joined the Joseph Campbell Company of Camden, N. J., at that time a small concern packing preserves, jams, jellies, canned vegetables, etc. Having mastered the business, step by step, along its original lines, Dr. Dorrance in 1898 conceived the idea of packing soup in condensed form by an improved method which retains all the original nutriment and flavor while greatly reducing the bulk and the consequent cost of packages and transportation.

This revolutionary idea has been well called a stroke of genius, its effect on household economics throughout the United States has proven a happy one, and beyond question it has exerted a potent and salutary influence on our national dietary and health.

As a result of Dr. Dorrance's sound and vigorous methods applied both to production and commercial development, Campbell's soups today are known wherever people speak English and eat soup.

Dr. Dorrance is an expert in scientific agriculture and husbandry, and devotes much attention to developing improved varieties of fruits and vegetables, as evidenced in the fine conservatories and beautiful gardens of his home at Pomono Farm, Cinnaminson, N. J.

Dr. Dorrance is a director of the National State Bank of Camden, N. J., and of the Old Colony Trust Company, Boston, Mass., also the Atlantic City and Port Reading railroads. Socially, being a good mixer, he is a life member of the Manufacturers Club, the University Club and the Philadelphia Racquet Club; also a member of the Country, the Pen and Pencil and the Down Town Clubs, all of Philadelphia, and of the Baltimore Country Club, the New York Yacht Club, and the Midday and Technology Clubs of New York, the Riverton Country Club of Riverton, N. J., and the Seaview Golf Club, Absecon, N. J.

Arthur Canfield writes that there isn't any news in New York. The secretary doubts this and will call on him in a short time to get his proof of this statement.

Allison Owen, we learn from the New Orleans "Times-Picayune," the present commander of the Washington Artillery, is a native Louisianian and the son of the regiment's Civil War adjutant and late commander, Col. W. Miller Owen. He first enlisted in the National Guard of Louisiana in 1890, becoming sergeant of Company A, Fourth Infantry Battalion, and later first sergeant and sergeant-major. In 1892 he was transferred to the Washington Artillery, becoming sergeant-major shortly afterward. In 1897 he was commissioned captain and became adjutant, and in 1909 assumed command of the battalion with the rank of major. In this capacity he served on the Mexican border and when the command was expanded to a regiment he became lieutenant-colonel, July 12, 1917, and was commissioned colonel August 4. In this capacity he has served through the war with Germany.

In civil life Colonel Owen is an architect by profession, having been educated at Tulane University and at the Massachusetts Institute of Technology. He has served as president of the New Orleans chapter, American Institute of Architects, and for several years edited an architectural magazine published in New Orleans. He is a member of the Architectural Examiners and of the Louisiana State Board, architect of the New Orleans Public Library and the municipal office building.

Gerard Swope has just been made president of the International General Electric Company, Inc., which has been formed to develop foreign trade. We quote the following from the Schenectady "Union Star":

> Gerard Swope, who resigns as vice-president of the Western Electric Company to assume the presidency of the I. G. E. Co., Inc., was graduated from the Massachusetts Institute of Technology in 1895, and after a year in shop practice with the Western Electric became designing engineer in the power apparatus engineering department. After organizing the St. Louis branch in 1901 he became its manager, and in 1906 was transferred to Chicago as power apparatus manager. In 1908 he became general sales manager, with New York headquarters, and was elected vice-president in 1913.

Frederick A. Wood, lecturer in biology at the Massachusetts Institute of Technology, is the author of an interesting article recently published in the "Journal of Heredity" and subject of an editorial in the New York "Tribune" in which he produces a great deal of historical evidence to prove that despots are largely the products of the breeds of kings, this having especial reference to the late kaiser.

A letter just received from Sid Clapp, from Grand Gorge, Delaware Co., New York, states that he is still connected with the New York Water Works, engaged in digging an eighteen-mile tunnel under the Catskill Mountains to divert the Schoharie Creek into the Esopus Creek, one of the principal sources of water supply for New York City, thus augmenting the supply for some years to come.

Frank A. Bourne on Friday, October 18, 1918, became the temporary head of the Fine Arts Department of the Boston Public Library. The following is taken from the Boston "Transcript":

> It is expected that under Mr. Bourne's direction the Fine Arts Department will take on a new lease of life and find favor with a class of people who heretofore may have been unacquainted with its resources along architectural lines. Mr. Bourne is a graduate of the Massachusetts Institute of Technology of the class of '95. He received his master's degree the following year when he made a design for a free port of Boston to be located in Dorchester Bay, his place singularly enough including the territory now occupied by the Victory Plant. His design included the idea of covered piers, which were not then popular, but are today in common use.
>
> Soon after his graduation he became interested in the Fine Arts Department of the Public Library and he has since then given much time, principally evenings, to furthering its work. Now, however, he will give a large part of his time, both day and evening, to the department, but this does not mean that he will relinquish his offices in the Mason Building.

Accompanying please find a list of '95 men who were in active service in the army and navy. This list is not entirely complete and the secretary will be pleased to have any additional names which have not been included, and also corrections and additional information regarding the names included.

ABBOTT, LOUIS A.	Captain	Ordnance Corps
AMES, AZEL	Major	Coast Artillery Corps
AULTMAN, DWIGHT E.	Brigadier-General	Field Artillery, A. E. F.
BOEDEKER, JOHN	Captain	Coast Guard
BURKHALTER, DENISE W.	Captain	Engineers (Ry.) A. E. F.
CHURCHILL, PERCIVAL M.	Major	Engineers, A. E. F.
CLAFLIN, WILLIAM B.	Captain	Engineers, A. E. F.
DENSON, HUGH C.	Captain	Coast Survey
GAY, CHARLES M.	Captain	Engineers
GREGORY, JOHN H.	Captain	Sanitary Corps
HODGE, BENJAMIN	Major	Red Cross, Germany
KEMBLE, PARKER H.	Lieutenant	U. S. N. R. F.
KOTZCHMAR, HERMANN, JR.	1st Lieutenant	Coast Guard
LORING, ERNEST J.	Captain	Ordnance Corps
MESERVE, CHARLES A.	Major	Coast Artillery, Fort Banks, Boston Harbor. In France with 60th Coast Artillery
OWEN, ALLISON	Colonel	Field Artillery, A. E. F.
ROBINS, WILLIAM P.	1st Lieutenant	
SHEAFE, HARRY J.	Captain	C. W. S., A. E. F.
STORK, WILLIAM B.	Lieutenant (J. G.)	U. S. N. R. F. (A. E. F.)
STURGIS, RUSSELL	Captain	Sanitary Corps
SWOPE, GERARD	Brigadier-General	General Staff
TILLLINGHAST, C. F.	Colonel	Coast Artillery Corps
WATERBURY, CHARLES D.	Captain	Engineers. Died of pneumonia, in Washington, D. C., October 9, 1918.
WHITESIDE, GEORGE S.		Medical Corps, U. S. N.

WIGGAN, THOMAS K. H.	Major	Engineers, A. E. F.
WITHINGTON, P. H.	Major	Aviation, A. E. F.
WOLFE, JOHN C.	Captain	Engineers, A. E. F.

1896

CHARLES E. LOCKE, Secretary, M. I. T., Cambridge, Mass.

J. ARNOLD ROCKWELL, Assistant Secretary, 24 Garden Street, Cambridge, Mass.

The biggest item of news is that Rockwell is back from France and that we are to have a class dinner very shortly, at which he will speak. He has kindly supplied the following account of some of the things that he saw and did in France.

Impressed with America's duty in the World War, as soon as opportunity offered, I presented myself for service in the medical department of the army. The Massachusetts Homeopathic Hospital was among the first to organize a Red Cross Base Hospital Unit, and our organization (B. H. 44) was complete and most of the officers commissioned by August of 1917. However, no orders were received to report for active duty until April 3 of the following year. These telegraphic instructions were immediately complied with and two days later we reported at Camp Dix, New Jersey, for duty.

My appointment as chief of the medical service stimulated more than the average eagerness to take up the study of the duties required of such a position. There was ample opportunity at this camp to receive the best of preparation for the work ahead of us and when on July 5 we sailed from New York, under convoy, for the other side, I felt the three months' experience in an army hospital had at least given me some idea of the work in prospect.

It is hardly necessary to comment on the twelve-day trip to Liverpool. It embraced the discomforts and uncertainties that were common to all organizations going over at this stage of the war. Our hospital unit was put in charge of the inspection and general care of the troops on board, giving us some definite duties which relieved the monotony, otherwise unavoidable. The "Ulysses," an English ship, gave us fair mess and in general I feel that we fared quite as well as any of the other sixteen ships in our convoy. To have crossed the ocean safely with only vague submarine scares, in spite of our constant companion, the life preserver, was certainly an auspicious start. The necessarily poor ventilation and close confinement after dark to the cabins, was very wearing, and the sight of land on the morning of July 17, with many submarine chasers, dirigibles and additional cruisers guarding our entrance into the Irish Sea, was a most welcome and thrilling spectacle. Once at Liverpool we disembarked in due time, and marched to a "rest camp." "Rest" implied anything but the true significance of the word. Our days in this camp were quite typical of war conditions, with threatening and weeping skies. However, England holds no patent rights on rain, as our experience in France was even more depressing, as well as dampening, than England's best. Four days in and around Liverpool, with side trips to Winchester and Salisbury, a run across England to Southampton and a frantic rush across the Channel to Le Havre, brought our first chapter to a close.

Our arrival at the "rest camp" in Le Havre, after a five and a half mile march in the rain, was fraught with new sensations as we eagerly awaited the orders that would direct us to our permanent camp which, up to this time, was unknown to us. Two days later we were informed that our destination was Pougues les Eaux, a one-time popular watering place with its many hotels, some twelve miles from Mesves, where the main group of base hospitals was stationed. We were the only unit in this hospital center, which by the way is the geographical center of France, quartered in hotel buildings, the other units occupying new hospital buildings, adapted for greater efficiency, not only in their individual arrangements, but by virtue of their special grouping around "headquarters" buildings. We were notified at this time that our cases would include sick and wounded officers as well as men, the idea being that these hotels, adapted to hospital work, would offer more agreeable and satisfactory surroundings for the convalescent officer. The weary hours spent in regaining one's physical and mental forces, three thousand miles from home, are at best difficult to account for. We were able to so arrange these hotel buildings, assisted in our work most admirably by the Red Cross, as to bring a touch of home surroundings and comforts to the American fighting man. Without living in a war atmosphere, it is impossible for one to appreciate the eagerness with which these husky youths, but recently from the battlefields, accepted the friendly word and kindly touch of nurse and surgeon. These boys would withstand suffering, accept whatever mess was offered with a smile, and seemed to, for the most part, realize the difficulties, which very much limited the extent of our service.

To those of you who have spent much time in French hotels, it will hardly be necessary to enlarge upon the difficulties presented to us. Suffice it to say that a woefully inadequate water supply, lack of suitable toilet facilities, small, inaccessible, dark kitchens, buildings out of repair, and scattered promiscuously through a small town of three thousand inhabitants, with no communicating telephone system, no heating plants, electric lighting in only a few of the buildings, and the necessary crowding incident to the great demand for beds, made our initial task of preparing for patients a complex one.

Patients were sent in before we were ready for them, much of our equipment had yet to arrive, more than a third of our nurses had been assigned to other units, our surgical teams had been sent to the front. With this much curtailed organization, which had been established on the basis of a thousand-bed hospital, we faced the extreme demands of late September, October and November, under a great handicap. Our greatest census was something over seventeen hundred patients. Every available hallway, stairway landing, shed, and improvised shelter, was occupied. We realized for the first time that Sherman knew of what he spoke, yet we were far better off than the soldiers and officers in the front line trenches and were glad that we could in some way share the hardship of war and do our part toward relieving the sick and wounded. A description of the sick and wounded cases is quite unnecessary, but we took care of every variety of medical and surgical condition found in an army, and from reports sent to headquarters, we feel that our efforts were not in vain.

Our Red Cross organization did magnificent work in supplying our patients with every variety of need at their disposal. The Young Men's Christian Association entertainment organizations were of the highest order and, co-operating with the Red Cross, never failed to give our men excellent entertainments each week. Our professional efforts would have been much less effective but for the benefits derived from this untiring and faithful service.

Up to the time of the armistice, with the indefiniteness of the campaign, it was not difficult to keep the morale of the officers and men intact. With the cessation of hostilities, however, our task suddenly changed from one of caring for the wounded and sick, resulting from fighting conditions, to bolstering up and encouraging men who suddenly relaxed their every nervous, physical and mental control, only to find themselves restless, impatient, and eager to return home. It was then that we instituted the educational and athletic regime, organizing such groups of convalescent patients as could participate in one or another form of physical exercise, and carrying encouragement to those whose convalescence was slower and required a longer time before they, too, could become thus diverted.

As these hotel buildings were leased from the French government at excessive rental, with the close of hostilities we were ordered to prepare to evacuate this attractive town at the first possible moment. Our energies were then diverted to closing up Pougues and moving the hospital to Mesves, where we occupied unfinished, uncompleted buildings. We had experienced much rain and mud at Pougues, but upon arrival at Mesves, with no sidewalks laid and in a rainy season, where there was a daily downfall, our hip rubber boots were in constant service. From the middle of January on, our work practically amounted to nothing but routine "paper work," one of the necessary evils to army service, and during February and March, with constant rumors of "orders for home," we felt much as our chaplain did when he remarked that his morale was "shot to H——." The hardest work we had to do, I verily believe, was waiting, practically two months and a half, without work, with library and equipment packed for a moment's notice, the orders for "homeward bound." During this period, most of our younger officers were transferred to various army posts, and it became a daily speculation as to who would be the next one to go to the front, or to some special duty in the S. O. S. The ax fell upon my neck the day before we were to depart for Brest. My decapitation was averted only through the friendliness of the acting commanding officer, who interceded in my behalf, and had the order calling me to Boursin as medical consultant for the center, rescinded.

The twentieth of March found us boarding a conglomerate collection of French coaches headed for Brest. At Brest I ran into "Rusty," who was on a day's mission to headquarters, and he never looked better in his life. After two weeks' stay at this much-underestimated debarkation camp, we sailed for the United States of America on the "Graff Waldersee," one of the Hamburg-American steamers just taken over by our government. After a twelve days' uneventful voyage, we slid under the shadow of the Statue of Liberty with the "welcome committee" band playing "Home, Sweet Home," and I never again expect to experience the sensations that came over me. Later, at Camp Merritt, we learned that officers and men alike were wonderfully impressed with the spirit of welcome extended by those of you who were less fortunate than we, in receiving overseas work, and I know I sense the opinion of most of the American Expeditionary Forces in saying that the "stay at homes" played a part less spectacular but just as essential as the man who carried the gun, and without that unselfish spirit, our successes would have never materialized.

April 30 found me a free man. Fully realizing the great undertaking which America decided to shoulder, the question of transportation, supplies of all kinds, training of an army, equipping that army, and the care of that army at war, we should be somewhat charitable in our attitude toward the army and navy program and its fulfillment. However, I feel very much like the officer who telegraphed his wife: "Deloused, discharged, delighted."

Beyond the chance meeting with Le Baron Russell, who, to the best of my knowledge, is still over there, I did not run across any '96 men.

The secretary has also received a notice to the effect that Frank Guptill should now be addressed at the Engineers' Club, Boston, but the secretary has not received any reply as yet to a letter addressed to him there.

Word has been received of the death of Maurice Black, in Detroit, and the secretary has written to Mark Allen, asking for some details, but so far these details have not been received. The secretary hopes to be able to supply a detailed account of Black and his work later.

Another death of which the secretary has received a very belated notice is that of Fred Coburn, which occurred on March 17, 1918. The following account has been kindly supplied by Charley Foss:

Fred Coburn was born in Lowell, January 30, 1873, was educated in the public schools and entered the class of '96 at the Institute where he studied in '92 and '93.

In 1893 he entered the employ of the C. B. Coburn Co., a business established by his grandfather in 1837.

In 1909, upon the death of his father, he became treasurer and general manager of the company and in 1910 became sole owner and manager.

From that time until his death, by good business ability, he greatly enlarged and improved the business.

During the last four years of his life, although he was handicapped by trouble with his eye, which practically amounted to blindness, he remained actively in business until within a few months of his death. During this period he suffered a gradual decline to the end.

Bert Thompson is now spending some of his time in Boston, acting as vice-president of the Parks-Cramer Company, having a Boston office at 1102 Old South Building, Boston, Mass. He is very busy pushing the Merrill Process of fluid heat transmission which makes use of oil as the transmitting agent. The Parks-Cramer Company are the general agents for the Merrill Process. For further details, write Thompson.

Bradley Stoughton paid a flying visit to Boston on April 28, and the Secretary saw him at the meeting of the Boston section of the American Institute of Mining

Engineers on that date. Stoughton is not yet entirely out of war work, but is still in Washington, and reported that he frequently runs across Marshall Leighton there. Speaking of Washington calls to mind that Dr. George K. Burgess, retiring president of the Philosophical Society of Washington, gave an address on "Science and the After-War Period," at the annual meeting of the society held on January 4.

Charley Lawrence was over in Boston on April 16 and brought his son, C. K. Lawrence, who is planning to enter Technology this year.

Another '96 man who recently called on the secretary was W. E. Spencer Deming, who also has a son who expects to enter Technology next fall.

Frank Thanisch writes from Clifton, Ariz., that he has left the Cananea Consolidated Copper Co. in Mexico because of the general curtailment of copper production which followed the signing of the armistice. He is now with the State Highway Department of Arizona and reports that road building is experiencing a boom.

The following changes of address or title have been received:

Capt. Thomas W. Bailey, Kingston, Mass.—Mr. Frank E. Guptill, Engineers' Club, Boston, Mass.—Maj. Robert S. Hardy, 339 South Wilton Place, Los Angeles, Cal.—Mr. Edwin D. Pingree, Box 1485, Providence, R. I.; Maj. John A. Rockwell, 24 Garden Street, Cambridge, Mass.—Capt. James S. Smyser, 30 Chestnut Street, Worcester, Mass.—Mr. Frank A. Thanisch, Post Office Box 938, Clifton, Ariz.—Lieut.-Col. William G. Wall, National Motor Vehicle Co., Indianapolis, Ind.—Mr. John H. Willis, 288 Washington Street, Hartford, Conn.

Joe Knight has reported to the secretary that he is still in Washington the greater part of the time, attending to his duties as counselor for the National War Labor Board. These duties are likely to continue for a few months more at least, and Joe will thus remain a commuter from Boston to Washington during that period. He reports having seen Charley Hyde a few days ago and that Hyde had received his discharge from the Sanitary Corps and was leaving June 12 for California. Hyde, in turn, told Knight that Bakenhus was making his headquarters in Washington, at the present time.

A regular meeting and dinner of the class was held at the Copley Square Hotel on Wednesday, June 25, the following men being present:

Jim Driscoll, Joe Driscoll, L. E. Emerson, Harry Fisk, Harry Gilman, H. G. Grush, G. P. Hatch, F. C. Hersey, Jr., H. D. Jackson, C. E. Locke, W. M. Partridge, M. E. Pierce, M. C. Priest, Johnny Rockwell, N. H. Sanderson, L. H. Tappan, Bert Thompson, Lucius Tyler, A. P. Underhill, Sam Wise.

Various matters were discussed, especially in connection with our next reunion, all of which will be set forth in a circular to the members of the class, but it may be said that it was the general opinion that, if a big reunion of all former Technology men is to be held in 1920, it would not be wise for '96 to attempt to celebrate, at that time, and also to hold another big celebration on the exact twenty-fifth anniversary in 1921. It, therefore, seemed best that we concentrate all our efforts on a big reunion in 1920, sacrificing sentiment a little and working for the biggest possible gathering, even though it would be actually our twenty-fourth anniversary, instead of our twenty-fifth.

1897

JOHN A. COLLINS, JR., Secretary, 67 Thorndyke Street, Lawrence, Mass.

CHARLES W. BRADLEY, Chairman Executive Committee and Acting Secretary, 54 Canal Street, Boston, Mass.

The secretary is in receipt of the following, under date of April 15, from Jere R. Daniell:

> Back again to the good old U. S. A. after thirty months in sunny Spain, most of the time just across from Africa, at Cartagena, and the balance of the time in Madrid. We have had many interesting experiences among the "Dons," but at times things were hardly comfortable, as we never knew which way the country would jump. In general, the "ups" were pro-German to the core, and the "downs" pro-ally, while the "middles" were half and half and didn't want to get hurt, anyway. May return during the summer if things are quiet and business in my line looks promising.

Daniell is with the Electric Boat Company of Groton, Conn.

Walter E. Spear writes from Camp Upton as follows:

> Have been relieved as Utilities Officer at Camp Upton, the position I have held since October, 1917, but am still retaining the position of construction quartermaster. I expect to finish up in a few weeks. Whether I shall be discharged, as promised, remains to be seen. In any event, I request that all mail be sent to my permanent residence, Merrick, N. Y.

Spear holds a commission as major in the Quartermaster Corps.

Walter Humphreys was elected secretary of the Boston English High School Association at a recent meeting of that organization.

Arthur P. Hopkins, care Candee & Co., New Haven, Conn., contributes the following interesting notes:

> I think the response in the last number of the REVIEW to your appeal for class news is very gratifying and I want to congratulate the Executive Committee on results.
>
> From 1912 to 1917 I was manager for the United States Rubber Company of the factory at Cleveland, Ohio. This middle-western experience was a great thing for my family and myself, and we shall always be grateful that we had the opportunity of knowing something of Ohio and adjoining States. Personally, I believe there are more New England people in Ohio than there are in Massachusetts, Rhode Island and Connecticut today. In 1917, however, we were desirous of moving back to New England so that our children might have their college preparatory work in the East, so we have settled in New Haven. I have been made manager of the Service Department of the Footwear Division of the United States Rubber Company, with headquarters in New Haven and an office in New York and Boston. The Service Department includes the functional organization of our footwear and clothing factories and has to do with laboratory control, engineering, modern management methods and industrial relations. We have a variety of schools for developing the men for the various lines of work and have accomplished large results in developing and up-grading the promising men and women of the division. It is the most interesting and important work in which I have had the good fortune to be engaged, and it promises large returns to our company.
>
> I maintain my health, by reasonable devotion to golf and open air sports, and I take a proper interest in the social, civic and religious interests of the community. I am acquiring a well balanced library, and my slogan is "Five miles a day and two books a week."

We regret to learn through E. M. Blackburn, 24 Littell Road, Brookline, of the death of Miss Helen C. Mills, on February 1, 1919.

William W. Locke has sent in to the REVIEW office the sad news of the death, on April 27, 1919, of Miss Harriet F. Locke.

Proctor L. Dougherty writes under date of March 29:

The yellow letter and the three-cent stamp did the trick. I do not wonder you think '97 " yellow " as to class news. Many times have I started to write as to my own bit during the fall and winter, but generally found myself too busy to proceed far until the stamp that could not be thrown away arrived. During the summer I was appointed District Representative in the New York office of the Emergency Fleet Corporation in charge of the educational and training activities with reference to the shipyards having government contracts. While engaged in this work I have met a good many Tech men, among them Desmond, '09, who is the president of the Newburgh Shipyards, Inc. The other day I dined at the Engineers' Club of Philadelphia with Billy Eaton, who is with the Monotype Company. As to my work, a brief description follows:

The Education and Training Section of the Emergency Fleet Corporation was organized under Admiral Bowles, Manager Ship Construction, September 12, 1917, at which time there were thirty-seven steel shipyards and twenty-four wood shipyards employing about fifty thousand men. Instructions were issued to prepare to train men so that the number of skilled workers would be increased tenfold. At the time the armistice was signed eighty thousand green men had been trained into skilled workers, which represented an increase of about three hundred per cent in the skilled tradesmen in the shipyards under the jurisdiction of the Emergency Fleet Corporation.

In order to fit the instructors to teach the learners the yard was asked to select a few of their best mechanics from the various trades who were given a six weeks' course of instruction in the art of teaching their trade by a Staff Instructor from the Emergency Fleet Corporation. All the expenses of the latter were paid by the government. The method used by the Staff Instructors was that previously outlined by Charles R. Allen of Massachusetts.

By this means the Training Department in each shipyard was enabled to turn over a certain number of trained men in the various trades every month to the Production Department. At the Submarine Boat Corporation, for instance, about one thousand men were turned over to production every month who previous to coming to the yard had been policemen, tailors, liquor dealers, waiters, bricklayers, carpenters, etc; in fact, had been in almost every conceivable occupation.

This work proved to be most interesting and was next best to actually going overseas and fighting.

Major Z. B. Adams is in the Medical Corps, U. S. A. He writes:

Have been eighteen months with the A. E. F. in France. Am now in the office of the Surgeon-General, Washington, D. C.

Henry F. Hoit writes from Kansas City, Mo.:

We have recently gone into new offices at 607 Reliance Building, this city, and we have changed the firm name Henry F. Hoit, Successor to Howe & Hoit, to Hoit, Price & Barnes. Mr. Edwin M. Price is a Tech man of the class of '08; both he and Mr. Alfred E. Barnes have been with me for a number of years. It might interest you to know we are now erecting the large Main Exchange Building here for the Southwestern Bell Telephone Company. It is to be a twenty-story structure.

From Ethan H. Howard comes a very good reason why each member of the class of '97 should write in his bit to the secretary:

I am always exceedingly interested in anything about the men in the class and I hear very little in any other way than through the REVIEW. For the last few years my health has not been all that could be desired and consequently I have not been able to attend class reunions and alumni gatherings, and as my home is in the country, I am largely cut off from any news. My life goes on in pretty much the same old rut that it has for some time past. I could take no active part in the war, though my son was in the navy from the time that war was declared. I am still growing fruit at the same old place on Niagara River, and I wish some of the boys could drop in on me during peach season and get a sample of our achievements along that line.

C. S. Koch, '98, in April sent in the news of the death on April 2, 1919, of William Aleck Faxon.

Lucius S. Tyler writes of his work during the war very modestly. He does not consider that his part has been worth mentioning in comparison with that of those who "actually went to it and were a real factor in the war." He writes:

> I have very little new to report. I was given a place on the War Industries Board in this region as chief of the Department of Requirements and Sub-Contracts, where my experiences in manufacturing were worth something, or would have been if the war had continued.
>
> The organization was still in process of building when the armistice was signed, but meantime we were kept quite busy as you may imagine since matters pertaining to conservation of materials — priorities in both material and construction — placing, or rather assisting in placing, government contracts in New England, and assisting those not equipped to take direct contracts, to secure sub-contracts, were all handled by our office for all New England, except Connecticut and Western Massachusetts. The restrictions imposed by the government on material made it practically impossible for me to do any business, so I spent practically all of my time with this board from August well into December. I conducted the Fourth Liberty Loan Drive and the United War Work Drive in my precinct — Ward 25, Precinct 5, in Boston, and those were a lot of work while they lasted.

H. M. Loomis writes under date of April 22:

> I am now making my home at Eastport for at least eight months in the year, in connection with the sardine canning industry. This is the beginning of my fourth season here in charge of a voluntary system of inspection started by the packers in 1916. The sardine industry is scattered all along the Maine coast so that it means a great deal of traveling which, of course, makes the work very pleasant in the summer months. During the past year the United States Food Administration decided to exercise some supervision and regulation over the sardine industry. After working during the winter of 1917-1918 as an assistant in the Canned Foods Division of the Food Administration at Washington, I was appointed chief of the Sardine Inspection Service in Maine and Massachusetts and our inspectors were made deputies of the Food Administration to carry out the rules and regulations governing that industry.
>
> During the past three years I have made my headquarters in Washington from December 1 until April 1, as the head office of this Association is located in that city.

We regret to learn of the death of Dr. Mortimer Frank. The following is copied from the New York "Times" of April 23, 1919:

> Dr. Mortimer Frank, eye specialist, is dead at his home in Chicago from an apoplectic stroke. He was born in Chicago forty-five years ago, and was a graduate of the Massachusetts Institute of Technology and the Medical Department of the University of Illinois.

The "Chicago Tribune" of April 23, 1919, prints the following notice:

> Dr. Mortimer Frank, well-known eye specialist, is dead at his home at 1059 Hyde Park Boulevard. He suffered an apoplectic stroke Saturday night and died Monday morning. He was buried today at a private funeral from his home, interment being at Rosehill Cemetery. He leaves a widow, Mrs. Donie K. Frank, and two small daughters, Katherine and Mary Elizabeth.
>
> Dr. Frank was born in Chicago in 1874, and was a graduate of the Boston Institute of Technology and the medical department of the University of Illinois. He was the author of a number of papers on eye diseases and the history of medicine and was secretary of the Medical Historical Society of Chicago. He was formerly a trustee of the Chicago public library.
>
> His library of old and rare medical books, numbering several thousand volumes, has been valued at many thousand dollars, and was the envy of the medical profession of the city.
>
> It is said Dr. Frank never once turned down a case of a person unable to pay for treatment. He was a cousin of Dr. Ira Frank and had offices at 30 North Michigan Avenue.

Arthur P. Hopkins writes the acting secretary the following personal tribute to the memory of Dr. Frank:

> I see in a recent number of "The Tech" that Mortimer Frank of '97 is dead. I do not know whether you knew Frank very well, but I got well acquainted with him on a couple of occasions in Chicago and I consider him a very fine fellow. He had high rank there in his line, which had to do with the eye, I understand. He published a number of papers and was president, I believe, of one or two medical societies.

1898

A. A. Blanchard, Secretary, M. I. T., Cambridge, Mass.

The secretary regrets having announced in the last issue of the Review the proposed celebration of the twenty-first birthday of the class, but at the time of that writing it seemed so certain that plans were going through that the statement seemed justified. Unforeseen difficulties arose which made it seem better to postpone the event until September. From the number of letters and telephone calls recently received on the subject it is evident that the men of the class want a reunion, and the Executive Committee says that we will have one.

The following mighty interesting letter comes from Harold Jones:

> Headquarters, Beau Desert Hospital Center, Base Section No. 2, A. P. O. 705
> S. O. S., A. E. F.
>
> April 10, 1919.
>
> Some weeks ago I had a request from you for news and I meant to reply but have kept putting it off because there seemed so little to say. I am still on the job at Beau Desert. We have had nearly fifty thousand patients here during the war and I suppose will continue to do business for several months. I do not expect to get back to the United States for a good while yet, as officers of the regular army are not in the preferred class, when it comes to passage back home. Of course our families don't take kindly to this, but as we made our bed, so we must lie on it. I am in fine health and like France very much and have many friends here now. The only other news I can give you is that I was decorated by Marshal Petain a short while ago with the cross of Chevalier of the Legion of Honor. You might want to know why, which is embarrassing, for I really don't quite know unless they want to acknowledge the efforts I made to keep the peace as " mayor " of a city of twenty thousand in a French community. However, I am not unappreciative of the honor and especially of receiving it personally from Marshal Petain. Please remember me to my friends and let us hope we shall meet at a reunion in the near future.

A recent note from Ernest Russ was on the stationery of the Russ Gelatine Company and the letterhead shows a picture of an extensive three and a half story factory at Westfield, Mass. This is only one branch of Ernest's business, at that, and it will be remembered that at the time of our last reunion six years ago, he was only contemplating starting out independently.

A letter from Charles A. Stickney, formerly of Chattanooga, Tenn., more recently of 54 Franklin Street, New York City, states he is preparing to move to Peterboro, Ont., Canada, where he has purchased a factory and will manufacture motor trucks, tractors and gas engines.

1899

WILLIAM M. CORSE, Secretary, care Ohio Brass Company, Mansfield, Ohio

BENJAMIN S. HINCKLEY, Assistant Secretary, 177 Park Street, Newton, Mass.

J. B. Ferguson of Hagerstown, Md., sends us the following interesting notes:

"More than a year ago the firm of J. B. Ferguson & Company undertook the job of supervising engineers on the construction of Camp Abraham Eustis, Virginia, a Coast Artillery affair for the training of officers and men in heavy artillery fire. Being in one of the busiest war localities of the country, the Virginia Penninsula, close to Newport News, Yorktown and Norfolk where extensive construction work was already under way, and also being in swampy land with unattractive surroundings, it was not an easy camp to build. Eight thousand acres of land were purchased in small parcels, surveys of which we had to make at the same time we were carrying on the topographic surveys and construction work. As soon as the construction work was well under way extensive additions were planned, and we were asked to take charge of a balloon observer's school near by and later of the construction of twenty miles of concrete roads from Newport News to Yorktown. You may well believe that we were busy especially because of the difficulty in getting and holding good men on account of the draft and the desire of so many to take an active part in the war.

"A couple of months after the troops came in, I found out that the camp quartermaster was Major C. A. Watrous, M. I. T., '99. He happened to drop into the office to borrow some drafting materials one afternoon. After a little cross questioning both ways, we discovered each other. We had not seen each other since '99, but had little time to talk over the past before the Major was transferred to other duties, but not, however, before he had an opportunity to render me mighty valuable service in the "floo" epidemic, for which I shall always be grateful to him. Last summer at Washington, I also discovered C. E. Smith (Major), who started in with '99, who was in the Construction Division. He had grown pretty plump (as I understand you have) and had lost a lot of hair, so that it took me a little while to penetrate his camouflage. We had several talks which were interesting to me, as I found that Smith was doing rather unusual work in St. Louis.

"Another unexpected encounter in Washington was with Major Bigelow, formerly our commandant. Though I had not seen him for something more than twenty-two years, I knew him instantly. In a conversation with him, I told him how valuable to me his lectures on military science were in the past crisis, for I had reread them on the outbreak of the war. The Major is now with the General Staff, I believe.

"In February I was in Boston and spent some time at the Tech Building and also found time to drop in on Tommy Pendleton Robinson (take your post, sir). Not having seen him since '98, or thereabouts, I spent a mighty pleasant afternoon swapping histories of the past twenty years.

"Work at Camp Eustis is still going on, but will probably be wound up in another month. Work on the concrete roads was suspended during the winter, but will be resumed in April. I think we still have about thirty-five men on our force, several of whom are M. I. T. men. Davis, 1906, was in charge of road work during the summer."

F. L. Lacaff, IV, is with the Holland Furnace Company, Holland, Mich.

At a special term of the Supreme Court held in the Borough of Brooklyn, N. Y., Herman Henry Schmidt was allowed to change his name to Herman Henry Smith.

The address of Prof. Clancey M. Lewis has been changed from Beaux Arts, Washington, to 802 Arctic Building, Seattle, Wash.

Clancey M. Lewis, Course 3, who spent five years in China immediately following his graduation, is keeping up his interest in Oriental affairs as noted by his recent activities in the organization of the Russian Club of Seattle, of which he is secretary. Lewis was also one of the organizers of the China Club of Seattle, was its first secretary and has continued in that capacity since its organization in 1916.

Maj. James H. Walton, formerly of Newburyport, Mass., returned on the "Calameres" from France January 25. He was professor of chemistry at the University of Wisconsin when the war broke out, was commissioned and assigned to the gas service. He went over last June.

The proposed Twentieth Class Reunion will probably be held at the Lake Placid Club, Lake Placid, N. Y., during the week of September 22. Definite announcements will be made from time to time to keep the members of the class informed. The reunion will depend, of course, on the number of men who advise that they can attend.

The Lake Placid Club is especially adapted for this sort of a reunion and is making special effort to secure them. They have made special rates for rooms and athletic sports, which, combined with the probably low excursion fare made by the railroads, should make the reunion reasonable in cost. Those members of the class who have visited the Lake Placid Club are all very enthusiastic about it as a place to hold the reunion.

From the "Electrical Review," Chicago, Ill., of May 17, is taken the following:

Frank F. Fowle, until recently one of the receivers of the Central Union Telephone Co. and formerly consulting engineer, and James R. Cravath, well known consulting electrical and illuminating engineer of Chicago, have formed an engineering partnership under the firm name of "Fowle & Cravath," with offices in the Monadnock Block, Chicago. Both partners are men who have made national reputations in their work and are especially well known in Chicago and the Middle West. The services of the firm will be devoted to investigations, research, design, supervision, management, appraisals and rate cases, in the several fields with which the partners have heretofore been identified.

Mr. Fowle was graduated from the Massachusetts Institute of Technology in 1899, in the electrical engineering course, and then served nine years with the American Telephone & Telegraph Co. in various capacities in the engineering, railway and operating departments, finally serving as manager of the Chicago territory of the long-lines system. From 1908 to 1912, Mr. Fowle was in practice as a consulting engineer, with headquarters in Chicago, during which period he served numerous important interests, both corporate and municipal. In 1912 he went to New York and jointly with Dr. A. S. McAllister was in charge of the editorial department of "Electrical World." In 1913 Mr. Fowle became editor-in-chief of the "Standard Handbook for Electrical Engineers," published by the McGraw-Hill Book Co., and again entered engineering practice, in New York. Early in 1914 he was appointed one of the receivers of the Central Union Telephone Co., in connection with the Read suit, by Judge William E. Dever of the Superior Court of Cook County, Ill., the other receivers being David R. Forgan and Edgar S. Bloom. Messrs. Fowle and Bloom served as the chief executive and operating officials of the system throughout the five years of receivership, until recently discharged by the court in consequence of the settlement of the litigation.

Mr. Fowle is an active member of many technical societies and has served on many of their committees. He was chairman of the Telephony and Telegraphy Committee, American Institute of Electrical Engineers, and has just been made a member of the Development Committee, Western Society of Engineers. He has also just been elected a manager of the American Institute of Electrical Engineers, and re-elected manager of the Chicago Section, Illuminating Engineering Society.

M. Scott Matheson, Course 2, who has been for many years identified with the shipbuilding industry of the Pacific Northwest, recently manager of the Westerman

Iron Works, has joined with Cecil Bacon and purchased the Westerman interests and will continue in the managerial capacity at the Bacon Matheson Forge Company.

W. H. Mandeville writes from Tulsa, Okla., that he is living in the best city in the world and following the oil game over Oklahoma and Texas.

Mrs. A. A. Johnson writes from Washington that Johnson is first lieutenant with the 22d Engineers' Railway and has been in service since August, 1918. He has been in France since September, 1918.

H. K. White writes from New York that this year finds many of the class apparently more or less disorganized or upset as a result of the war, but is in favor of a reunion, preferably deferred to a later date than this year.

Norman P. Rood's address has been changed from St. Louis, Mo., to 2501 Willard Street, Wilmington, Del. He is now connected with the Hercules Powder Company.

1900

INGERSOLL BOWDITCH, Secretary, 111 Devonshire Street, Boston, Mass.

Every member of the class who knew John F. Wentworth will be sorry to hear of his death which took place last winter. The secretary was not informed of it until he saw a notice in the 1901 class news, in the last copy of the REVIEW. He happened to be passing through Rochester, New Hampshire, Wentworth's native town, on the first of June, and was able to obtain a little information about him.

He was taken sick some time last summer and had to give up his position in the Navy Yard at Charlestown. He went to stay with his family at Rochester, hoping that the change of air would do him good. He did not seem to get much better and was unable to resist an attack of influenza. His married sister is going to look after his children and they will probably be brought up with the best of care. Wentworth's father was one of the biggest tax payers in Rochester, and is supposed to have left his children in good circumstances.

Stanley Fitch was on May 1 admitted as a partner in the firm of Patterson, Teele & Dennis, Certified Public Accountants. He has been in the Boston office for some time, and has given courses in accounting at Boston University. He has also done some work of this kind at the Institute. If anybody wants to learn how to balance his check book or make out his income tax return let him go to Stanley. He would be of great use to the class and the public in general if he could persuade the authorities at Washington that it is impossible to make out a form that will cover every point that may come up. This seems to be their object and the result is that nobody knows where they fit in.

Neall announces the arrival on May 26 of William Gray Neall. He thinks that this is the best son he ever had and it must be a fine one judging from what he thinks of the others. He is named after his maternal grandfather. Neall left the service on May 17, and plans to open his office again in the fall. He is taking his family to his farm on the Cape, and will devote his summer to them. He feels that he has been away so much from them that it will take the summer to get acquainted again.

Jim Batcheller moved his family to Mattapoisett for the summer and then left for Alaska for two months. He has been living in Brookline this winter and it is hoped that he will be able to stay near Boston in the future. His family was taken with the flu and Jim had a very bad time with it.

Russell has begun his work as head of the Junior Plattsburg Camp. He expects to have a very busy summer, and is planning to give a very interesting as well as instructive course to the boys who attend.

A meeting of the class secretaries was held at the Walker Memorial on June 12, to discuss the compiling of a memorial volume to those who took part in the war both as civilians and soldiers. The object of the volume is to get a complete record of what Institute men have done to help win the war. A questionnaire is to be sent out and every one who receives it is supposed to fill it out and sign his name to it. If he cannot fill it out let him sign his name and return it so that the committee in charge will know that he has at least received it and is probably too bashful to give to the world an account of the good he has done. This question of returning the questionnaires is very important both from a financial point of view and from the point of view of the secretaries. It is going to cost a good deal of money to send out these questionnaires and if the work has to be duplicated, as it will be if the first paper is not returned, the expense will also be duplicated. The secretaries are to be requested to help in the follow-up work and if the papers come right back the secretaries will not have this work to do and can devote their time to more useful matters. Therefore, fill out your questionnaires and return them as soon as possible after they reach you. Remember that the committee in charge of this work has a great deal more to do than you have and it is only fair to them to do your part and make their work so much easier.

Bowditch was re-elected the class representative on the Alumni Council. He hopes that the class does not feel that it is necessary to have him continued in this office forever, and that his feelings would be hurt if somebody else wanted the job. He will do what he can to help along the work of the Council.

The following changes of addresses have been received:

Mr. Eric W. Bailey, 83 Inman Street, Cambridge, Mass.—Mr. James H. Batcheller, Post Office Box 36, Mattapoisett, Mass.—Mr. Stephen P. Brown, 969 Park Avenue, New York, N. Y.—Professor E. E. Bugbee, Massachusetts Institute of Technology, Cambridge, Mass.—Mr. Frank D. Chase, 645 North Michigan Avenue, Chicago, Ill.—Com. Frederick H. Cooke, Bureau of Yards and Docks, Washington, D. C.—Mr. Carleton Ellis, 92 Greenwood Avenue, Montclair, N. J.—Capt. Walter Hallstrom, Eastern Department, Governors Island, New York.—Col. James C. Heckman, 196 Soldiers Place, Buffalo, New York.—Lieut. Albert S. Merrill, Ordnance Department U. S. A., Room 606 Royal Bank Building, Toronto, Ontario.—Professor Morton C. Mott-Smith, 212 North Harvard Boulevard, Los Angeles, Cal. —Com. Clinton D. Thurber, Bureau of Yards and Docks, Navy Department, Washington, D. C.—Col. George S. Tiffany, 1162 4th Avenue, Louisville, Ky.—Mr. Walter C. Whitney, 1907 15th Street N. W., Washington, D. C.

1901

ROBERT L. WILLIAMS, Secretary, 107 Waban Hill Road North, Chestnut Hill, Mass.

The following is the latest list that the secretary has of 1901 men in the army and navy. We would be pleased to learn of any others. Also we would be glad to hear from these men, giving us an account of their work and experiences:

Capt. W. T. Aldrich, Ord. C.—Lieut. H. F. Benson, N. Am. Motors Co.—Ensign C. Bittinger, U. S. N. R. F.—Inspector H.T. Blanchard, Sig. C.—Maj. R. H. Brown, San. C.—Capt. George I. Cross, Eng. A. E. F.—Capt. M. Estabrook, Ord. C.—1st Lieut. S. Hazlewood, Eng.—Lieut. (J. G.) C. E. Miller, Jr., U. S. N. R. F.—Maj.

J. F. Monahan, Ord. C.—Maj. Ralph Plumb.—A. W. Rowe, Med. C., A. E. F.—Capt. B. E. Schlesinger, C. W. S.—Capt. S. C. Sears, Eng.—Maj. R. L. Shepard, A. E. F.—Lieut. R. H. Stearns, U. S. N. R. F.—Capt. Solon J. Stone, Eng.—Capt. W. W. Walcott, Med. C., A. E. F.—Lieut.-Com. Ralph Whitman, U. S. N.—Maj. L. P. Wood, Eng.

The following is taken from the " Electrical World ":

W. I. Bickford, who was elected chairman of the Atlantic division of the Electrical Supply Jobbers' Association at the recent meeting in New York City, has been secretary-treasurer of the Iron City Electric Company, Pittsburgh, Pa., since its organization in 1907. Mr. Bickford was born in Washington, D. C., November 13, 1879. He attended Phillips-Exeter Academy and in 1901 was graduated in electrical engineering from the Massachusetts Institute of Technology. During the following school year he was an assistant instructor in the department of electrical engineering and physics at the Institute. He then became electrical engineer in the office of the supervising architect of the Treasury Department at Washington and in 1903 became associated with the Iron City Engineering Company, Pittsburgh. In September, 1904, he became secretary-treasurer of the company. Mr. Bickford is a member of a number of prominent Pittsburgh business and social societies and for the past two years has been a member of the executive committee of the Electrical Supply Jobbers' Association.

Word has been received from Mr. and Mrs. William C. Arsem of the birth of Xoma Bergin Arsem, April 25, 1919.

With deep regret I have to announce the death of our classmate, William W. Walcott, last March, in France.

The Boston " Transcript " gives the following:

Capt. William Wright Walcott, regimental surgeon of the 101st Engineers, died in France on March 16, so a telegram received in Natick by his sister, Miss Harriet Walcott, from the War Department announces. Captain Walcott's last letter home, written February 20, said that he was well and was looking forward to returning with the Twenty-sixth Division, of which his regiment was a part. A cable later brought the information that he was seriously ill but would probably live two weeks. The cause of his death is not known to his sister, who is the only surviving member of his family. She lives at the old homestead on West Central Street.

Last summer Captain Walcott was wounded by a piece of shell and was gassed, spending a month in a hospital on account of his injuries. He was promoted from first lieutenant to captain. He saw service at Chateau-Thierry, Chemin des Dames, St. Mihiel and Verdun, being in the last-named sector six weeks, at the signing of the armistice.

Captain Walcott was born in Natick thirty-nine years ago, and was graduated from Newton High School, the Massachusetts Institute of Technology and Harvard Medical School. He served as house officer in the Massachusetts General Hospital and eventually engaged in practice, shortly afterward becoming district health inspector under the State Board of Health, which position he held when called to the colors. He was on the medical staff of the First Corps Cadets about ten years, and went to France with the outfit when recruited to war strength, in the 101st Engineers.

Charles I. Auer is located in El Paso, Texas. He is business agent of Le Roy Consolidated Mines Co., of Dos Cabezos, Arizona, and manager of the Maria Mining Co., District Guadalupe, Chihuahua, Mexico.

N. L. Skene is assistant aeronautical engineer for the Burgess Co., Marblehead, Mass.

A. L. Galusha is mechanical engineer in charge of the gas producer department of the Nelson Blower and Furnace Co., Boston. He is the designer and inventor of the Galusha Marine Gas Producers.

Harry F. Benson, formerly chief designer in the turbine department of the General Electric Co., Lynn, is now mechanical engineer with the Deane Steam Pump

Co., of Holyoke, Mass. He is standardizing the company's products with a view to reducing the cost and increasing the speed of production.

John M. Perkins is works manager for Gilbert & Barber Manufacturing Co., Springfield, Mass.

A. C. Jewett is planning and preparation supervisor of the Central Engineering Department and Cartridge Process and Equipment Engineer of the Winchester Repeating Arms Co., New Haven, Conn. He writes:

> I see that expenses are $43.20 and cash on hand $35.17, so you need $8.03 to run the year. I am contributing herewith about one-eighth of this. I am glad you are running on so low a basis. I never did think much of spending a lot on organization work of this sort. Instead I favor occasional "get-togethers" that are self-supporting and publicity through the REVIEW. In this connection we ought to have a professional publicity agent of the theatrical type to assist you in warming up the '01 column. Of course news is hard to gather, but about a thousand words on what the secretary is doing each month would do. Who wants the "professional publicity agent" job?

The following changes in address have been received:

John A. Trott, 17 Warren Street, Lexington, Mass.—Francis K. Baxter, 15 Rutger Street, Utica, New York.—Willard W. Dow, care of Stone & Webster, 120 Broadway, New York.—Frederick W. Freeman, 395 Danforth Street, Portland, Maine.—George D. Hall, Dover, Mass.—S. Berwick Miller, care of du Pont Co., Souviers, Colo.—Carlton R. Rose, 2512 Cedar Street, Berkeley, Cal.—Capt. B. E. Schlesinger, 68 Northampton Street, Boston.—Maj. R. L. Shepard, 79 High Street, Newburyport, Mass.—Frank D. Chase, 645 North Michigan Avenue, Chicago, Ill.—George I. Cross, Merrimack River Savings Bank, Lowell, Mass.—Arthur J. Eveland, care of Engineers' Club, 32 West 40th Street, New York.—Angus A. McInnes, 1421 University Avenue, Highbridge, New York.—Capt. S. C. Sears, 702 Walker Bank Building, Salt Lake City, Utah.—Lieut. R. H. Stearns, Bureau of Yards and Docks, Washington, D. C.—Fred B. Webster, Shipbuilding Cyclopedia, Woolworth Building, New York.—Maj. R. H. Brown, 21 East 127th Street, New York.—M. C. Brush, 1305 Medical Arts Building, 16th and Walnut Streets, Philadelphia, Pa.—Maj. Ralph Plumb, Buffalo Bolt Co., Buffalo, New York.

1902

FREDERICK H. HUNTER, Secretary, Box 11, West Roxbury Station, Boston, Mass.
BURTON G. PHILBRICK, Assistant Secretary, 585 Boylston Street, Boston, Mass.

On Saturday afternoon, June 21, an excursion of the class was held to the Wardhurst Club at Lynnfield, Mass. The trip was made by motor with Walker, Upham, E. E. Nelson and Charlie Mixter providing the cars. At the Club, Collier was awaiting us, having run over from Beverly to join the crowd.

After the fatigues of the journey had been suitably assuaged a game of baseball was staged with the following lineup: The Drymartinis—Edwards, catcher; Walker, captain and pitcher; Hamblet, first base; Moore, second; Collier, third; Nelson, left field and a lad named Billy as shortstop. As the team made many shifts in their desperate attempts to stop the triumph of their foes the list given merely crystalizes the facts at one stage of the contest. The other team, the Ryehighballs, was captained by Mixter, who caught, with Upham as pitcher; Boardman, first base; Philbrick, second; Nickerson, third; Dana Fisher (while he lasted) shortstop; and Hunter as left field. After six innings, with the Ryehighs leading twenty-two to thirteen, a recess was taken for refreshments; when play was resumed Billy had faded and as Dana F. had wilted after making three runs the alleged "nines" essayed only sixty-six and two thirds per cent. With the score thirty-two to twenty-seven at the end of the ninth inning, the Drymarts used the pencil vigorously and claimed a tie, but justice triumphed as the Ryehighs tightened up in the tenth and held the D-Ms to four runs and made five themselves with only one out.

The weary players repaired to the clubhouse, where a lobster dinner was served, and the sunset and other departing forms of illumination were observed with interest and pleasure. During the dinner a brief class meeting was held, resulting in the election of the following officers: President, Nickerson; vice-president, for Boston District, Walker; for New York District, Mathesius; for the Chicago District, Lockett and as assistant secretary, B. G. Philbrick. (The secretary was a hold-over.) Music and dancing filled in the time and the party broke up after raising the echoes with a class yell and a "We are happy."

Our military men are gradually being demobilized; Major Comins is back at St. Francois, Mo., and very modest as to how he won the D. S. O..—Major Seabury expected when last heard from to be back in Providence by July 1, where his address will be 63 Albert Avenue; we hear that he is to enter the contracting field.—Major Borden is recently mustered out and is making his headquarters in Fall River, where his address is 106 Highland Avenue.—Lieutenant-Colonel Wadleigh of the Marine Corps is now posted at Annapolis, Md.—Phil Worcester, our other classmate in the regular service, has been advanced to be a major of field artillery, but as yet we have had no details of the service of our two military men.—Frank Hill Smith is a lieutenant in the Coast Artillery Corps, A. E. F.—Major Harold Blanchard is back in Boston, his address being 925 Boylston Street.—Major Kenneth Grant is stationed at Langley Field, Va.—Captain Lockett is out of the service and is vice-president and general manager of the Lawson Manufacturing Co., 228 West Superior Street, Chicago.—We understand that Howard C. Judson, long carried on our files as "address unknown," is a major in the Marine Corps.—Captain Proctor is back with the Vermont Marble Co. at Proctor, Vt.—Major Paul Weeks is in the Tank, Tractor and Trailer Division of the Ordnance Department, Washington.

Les Millar has been for some months in Detroit, with the Hotel Tuller as headquarters, but we understand that this location is only temporary.—Hamblet is with the Avery Chemical Co., Lowell, Mass.—Robbie continues to shine in the columns of the Vocational Summary, and it is a poor issue of this publication, to our thinking, that has not at least one uplifting article from his pen.—Bassett has been chosen secretary of the newly formed Worcester Section of the Appalachian Mountain Club of Boston.—Matthies is in the New York office of the Western Electric Co., working on the automatic telephone proposition.—Ralph Franklin is now president of A. B. Franklin, Inc., Heating Engineers, 25 Haverhill Street, Boston.—Walker has moved his offices to 85 Devonshire Street, Boston.

A class dinner was held in New York at the Technology Club on April 25, with A. E. Hansen, Grant Taylor, Joe Philbrick, Dunc Franklin, Robbie, Reed, Hathaway, Montgomery, Ned Baker, Hammond and Mathesius, present. The dinner and reminiscences following proved so interesting that the meeting did not adjourn as planned, to attend a smoke talk being held by the Tech Club. Plans were laid to make the class gatherings in New York of a regular monthly character next winter.

1903

Myron H. Clark, 1790 Broadway, New York, N. Y.

Ralph H. Nutter, Assistant Secretary, Box 274, Lynn, Mass.

Your secretary on his recent trip abroad had the pleasure of attending a happy Technology reunion and dinner party at Francois Procope's in Paris on April 5, 1919. Among those present that '03 men know were, Col. (Dr.) James Norris, Col. Dugald C. Jackson, and Harold H. Gould, '04.

Eighty wounded men are to be assigned by the Federal Board for Vocational Education for training in electricity and auto mechanics' work at the Franklin Union under the direction of John W. Calnan, '03.

Changes in Address

Maj. Charles S. Cole, United States Cartridge Company, Lowell, Mass..—Capt. John L. Jones, Fairbanks Morse Company, Hudson Terminal, New York, N. Y.—Thomas M. Hamilton, Lewiston, Montana.—Albert A. Haskell, E. B. Badger & Sons Company, 75 Pitts Street, Boston, Mass.—Frank D. Hayden, 1906 East 65th Street, Seattle, Wash.—Mrs. William A. Hutcheson, 45 East 82d Street, New York, N. Y.—Lieut.-Col. Frank B. Jewett, Western Electric Company, 463 West Street, New York, N. Y.—Henry A. Pemberton, 732 Monadnock Building, Chicago, Ill.—Caspar A. Schmidt, Box 1860, Denver, Col.—Professor Richard C. Tolman, Cosmos Club, Washington, D. C.—Lewis Wehner, 726 Marshall St., Milwaukee, Wis.—Capt. William Winter, 1306 Fletcher Trust Building, Indianapolis, Ind.

1904

Henry W. Stevens, Secretary, 39 Boylston Street, Boston, Mass.

Amasa M. Holcombe, Assistant Secretary
610 Boatmen's Bank Building, St. Louis, Mo.

The Fifteen-Year Reunion

The fifteenth anniversary of the graduation of the great and glorious class of 1904 has been celebrated, and the celebration was some success. The gathering was held at "The Grand," Mount Vernon, N. H., June 20, 21 and 22, and twenty-six classmates were present. The Grand is located on the top of a hill one thousand feet above sea-level and commands a wonderful view of all the surrounding country. It is equipped with tennis courts, bowling alleys, swimming pool, croquet grounds, clock golf, miniature nine hole golf course, while a full size nine hole golf course lies close by. It constituted an ideal place to hold the reunion and all who attended were enthusiastic over the place and the treatment received while there. It is needless to say that all the above mentioned methods of amusement were thoroughly tried out. The "eats" were fine and not a single word of complaint was heard during the outing.

The following chronicle of the reunion is perhaps somewhat sketchy, and the author specifically disclaims all liability for all misstatements, falsehoods, lies, omissions, errors, additions, or deviations from any other person's remembrance of events, and grants permission to any one, dissatisfied with this record, to write one for themselves.

The start was made from the Engineers' Club, where the " gang " gathered and accepted the hospitality of Mert Emerson for lunch. Eighteen men made up the party and about one-thirty o'clock began to get under way for Mount Vernon, after about an hour spent in shaking hands and meeting old acquaintances. Comstock was in a deep quandary as to how to insure the absolutely safe arrival at Mount Vernon of certain class supplies. He finally solved the problem, after a spirited discussion, by splitting his load and forwarding a portion in his brother's car as far as Nashua, concealed beneath his young nephew.

On counting noses and automobiles it was found that we had more cars than passengers, which goes to show that the class is going some in financial matters. In order that no one should drive up without a passenger, Emerson, Jack Draper and Stebbins left their cars behind.

The following list shows how the cars were loaded and also gives a roster of those who were at the Engineers' Club: " General " Holcombe in full uniform rode off in Charles Haynes' Mitchell followed by Dick Hartshorne with Haley and " Gene " Russell as passengers in his Dodge.

Kalmus drove away with Emerson and O'Connor in a Franklin sedan. Harry Kendall loaded George Sanborn, Jack Draper, Evans and F. M. Chace into his Cadillac 8 and decided to follow Steve and Stebbins in the former's red-wheeled Kissel. Dave Sutton, with Roberts as passenger, completed the procession with his Paige.

Comstock decided he would leave Boston about five o'clock and would call at the Club for any stragglers.

The trip was made via Lowell, Nashua and Milford, without any incidents other than a couple of showers, without which no '04 outing can be considered complete. From Milford to Mount Vernon, stiff grades were encountered, but all the cars had arrived at the Grand by five-thirty.

The first thing done by each arrival was to take a look at the view and register a few remarks on the beauty of it and the wonderful location of the hotel. The next thing was to beat it into the hotel in the hopes of getting the best room in the place. All the rooms were good, but some were better. Some of the crowd got baths and some didn't have any all the time they were there. The crowd soon were ready for sport, and " General " Holcombe, accompanied by his chauffeur, Charlie Haynes, George Sanborn and Sutton rushed off to the golf course, where they got in some preliminary practice. The opening matches in the tennis tournament were also held before supper. Kalmus, single-handed and alone, defeated the best efforts of Mert Emerson and Stebbins, so handily that Kendall was added to the opposition. Kalmus again won by a score of six to nothing or less, although the author is firmly convinced that the trio got at least one point.

The next event was supper and everybody was in perfect trim. The waitresses were kept busy and finally reported nothing left in the kitchen, which brought the meal to a close.

After supper, we adjourned to the lawn, where clock golf, croquet, and miniature golf were indulged in. When the clock finally ran down at dark, Sanborn was adjudged the champion, having a score of something over twelve. " General " Holcombe towered far above all other contenders at croquet, and became champion without any effective opposition.

Dave Sutton won the miniature golf championship, having a score of twenty-six and seven-eighths for the nine holes. Steve was " runner up " at this, having " run up " his score to about one hundred ninety-two. About dusk Ed Parker arrived in chains, or rather in one chain, having made a cross-country flight from Portland in his Reo. He got stuck in the mud, due to believing implicitly in rural directions as to roads, and left one chain to mark the spot for the guidance of other autoists.

When it became too dark for further outdoor sports, we adjourned to the hotel where various card games were played, such as "Rummy" and bridge. O'Connor was the champion "Rumm" and Holcombe and his partner must have been doing well at bridge, for they couldn't be induced to quit until eleven-thirty. Haley, exhausted from watching the tennis games before supper, retired at nine o'clock. By eleven forty-five all had retired to their rooms, but if one listened at the various doors, the impression might have been gained that the reunion was being held by some young ladies' seminary from the amount of gossip going on.

SATURDAY, JUNE 21

Saturday morning dawned "brite and fare" and the first event was the arrival of Cy Ferris, piloting his Buick with "Tommy" Rockwood and Phil Sweetser as passengers. They had left Newton at five a.m. and arrived before most of the gang were out of bed, and were ready for breakfast. Supplies must have reached the hotel during the night, for there was no food shortage.

After breakfast, the whole bunch adjourned to the ball field. Sanborn and Holcombe were appointed captains and soon an honest-to-goodness ball game was in progress, which would have turned Ban Johnson green with envy, could he have seen it. The game was replete with sensational fielding plays, daring base running, tremendous strike-outs, weak hits, heavy hits, arguments, and every other thing that makes a ball game enjoyable. There was one serious fight between Charlie Haynes and Steve in which the latter bit his pipe stem into two pieces. "Gene" Russell playing third base made an unassisted triple play, by catching a fly ball with the bases full, stepping on third base for the second out, and tagging the short-stop of his own side for the third out. The pitching of General Holcombe and Emerson was truly remarkable, the former for its speed, and the latter for its slowness. Steve replaced Emerson in the last inning and, though batted freely, aided by remarkable support from the remainder of the team, retired twelve batters without a run being scored. Bill Evans, in chasing a fly ball, stepped in a hole and nearly ruined one of his ankles, this being the only casualty. The score of the game remains in doubt, the victory being claimed by both teams. During the game Bill Anthony and Buck Langley arrived from Boston and were made welcome.

Immediately after the ball game, the finals in the tennis doubles were played. Kalmus was assisted in losing this match by Steve, the winners being Emerson and Haynes, the score being two down (Kalmus and Steve). Then Kalmus and Haynes played in the semi-finals of the singles, Kalmus winning, the score being nip and tuck or six to five.

About this time Dan Comstock arrived in his eleven cylinder Packard roadster, having been on the road (presumably) since five p.m., Friday. His supplies were intact and he was received with open arms. He announced that he would be obliged to return to Nashua later to receive the second consignment of supplies.

During the remainder of the forenoon there were sporadic outbreaks of tennis, croquet and golf on the small course. Stebbins played a set of tennis with Langley and was defeated six to two. Soon after he was seen playing with one of the young lady guests of the hotel (aged about seven). The result of this match is not known. Todd arrived alone in his big Paige about noon, at which time aquatic sports were being held in the swimming pool by Stebbins, Roberts, Parker and Holcombe, assisted by one green bull-frog and a Florida alligator. Roberts got ferocious and bit the alligator, wounding it severely. Stebbins, in shooting the chutes, tried to break off the end of the chute with his heel, but only succeeded in getting a black and blue spot.

After this, Glee Club practice was held under the direction of Buck Langley, with Kalmus presiding over the piano. In this work Charlie Haynes' silver tenor and Jack Draper's reverberating bass were very much appreciated in the rendition of the Stein Song. Following the singing came the call to lunch which was vanquished with the usual ease and celerity. Joe Haraden arrived just in time to miss having lunch with us, but was ready for the rest of the big doings.

The afternoon was taken up with the qualifying round of the golf tournament on the big links. On arriving at the Clubhouse, all the players were making satisfactory financial arrangements at a dollar per head, with the fair young damsel in charge, when the young lady's father arrived on the scene, announced that the charge for an afternoon's golf was fifty cents and proceeded to distribute rebates.

The golf course was some course. The fairway was somewhat worse than fair most of the way. Fields of waving grain swallowed up any ball which deviated from the straight and narrow path. The greens were full of pitfalls and places where grass grew once. The marking flags were in fine shape, as were also the sand boxes and the water pails. The course was also finely equipped with wild strawberries, which were greatly enjoyed by certain players, while the caddies and the other players hunted for the balls driven by the fruit-fanciers.

The following players were declared as qualifying: Hartshorne, Haynes, Sutton, Emerson, Sanborn, Parker, Rockwood, Ferris, Russell and Haraden. As each of those mentioned owned a bag of clubs, it was felt that they must be qualified to play golf. Nearly everybody in the crowd participated, but any one not owning clubs could not expect to compete on even terms with the regular players. It was intended to hold the final round on Sunday morning, but somebody forgot it, and the championship was awarded to Dick Hartshorne on the strength of a score of forty-seven. Charlie Haynes was a close second with forty-eight. " Gene " Russell gets honorary mention for finding the most balls for other people. Chace earned the reputation of the best one-club player, playing the entire course using a single iron club. Chace said he wanted to get acquainted thoroughly with one club before trying any other.

During the interim before dinner, various small gatherings were held in different rooms, where different subjects were discussed in a spirited manner. Some of the boys were able to down anything suggested, no matter how complicated.

Dinner Saturday evening included the only business session of the outing. Everybody was present and this seems to be a good place to give the roster, which was as follows: M. L. Emerson, Hartshorne, Haraden, Todd, Haley, Jack Draper, Evans, Kendall, F. M. Chace, Anthony, Langley, Sutton, Holcombe, G. W. Sanborn, Rockwood, Comstock, Stebbins, Ferris, Roberts, P. S. Sweetser, E. H. Russell, A. W. O'Connor, Parker, Haynes, Kalmus and Stevens.

After the inner man was satisfied, the secretary read letters and telegrams of regret from many classmates. Bill Eager, Hiller, Gus Munster, Homer and " Volts " Ovington all sent messages that sudden emergencies arose at the last minute which prevented their attendance. Ovington is at Atlantic City, with the Curtiss Flying Station. He is flying again and said that if the reunion had been held at Atlantic City, he would have taken us all up. Interesting letters were read from Hayden and Lang. Plans for future class activities in connection with Institute affairs were outlined by Mert Emerson, who has recently been elected a member of the Corporation of the 'Stute. More will be heard about this later. It was the opinion of those present, that we are coming to the time in our lives when we should keep in closer contact with one another. It was the sense of the meeting that these outings should be an annual affair and it was so voted. Kalmus then extended an invitation to the class to spend the reunion for next year as his guests at Wianuo, Cape Cod. His invitation was unanimously and vociferously accepted and a heartfelt vote of thanks given him for his generosity.

Following the dinner a bowling match was held between two teams known as " A " and " B." The writer does not know which was " A " and which was " B," but the members and scores are given below.

Holcombe	59	Rockwood	69
Sanborn	67	Anthony	56
Haynes	63	Draper	62
Langley	80	Haraden	55
Ferris	85	Roberts	71
Evans	59	Emerson	62
	413		375

By the score, it will be seen that General Holcombe led his mates to victory, but Charlie Haynes confessed later that the pins on both alleys were mixed Boston pins and candle pins. By careful and unobtrusive methods, he succeeded in transferring all the Boston pins to the alley on which his team was bowling, while all the candle pins found their way to the other alley. There is no doubt that these Hunnish tactics had something to do with the result of the match.

After the bowling, the boys gradually drifted up to Comstock's room to an executive and musical session. Dan is sure some mixer, and before the session was over the supplies were considerably diminished. Reminiscences of 'Stute days were related, yarns were spun, and songs were sung by the Glee Club under Langley's leadership. A new class song, known as " The Tiger Song," was adopted, and will be used at all future reunions. About midnight the session broke up, amid expressions of regret that the next day would end the fifteen-year reunion.

SUNDAY, JUNE 22

Sunday was another beautiful morning, but nobody seemed very enthusiastic about early rising. There were numerous creakings heard as joints were carefully bent and tested. Ed Parker left for Portland before any one else had waked up. Comstock was the last man down to breakfast, being delayed by taking account of stock of the supplies.

After breakfast, the real championship ball game was played between the Kals and the Coms. The game Saturday was mere child's play, compared to this game. Stringent rules were made, precluding batting with both hands on the bat, base runners advancing on anything but batted balls, etc. Bill Anthony kept the score on a shingle. A glance at the score will show that both teams were slow starters, but whirlwinds at the finish. Comstock met his Waterloo in the fourth inning, his offerings being hammered to all portions of the world. Emerson relieved him in the fifth inning and was only five-eighths as bad as the score shows. Charlie Haynes was easily the star player, digging up grounders and throwing to first like a big leaguer. Holcombe ran bases like Ty Cobb, his fierce expression coupled with his moustache scaring the infielders out of his path. Phil Sweetser played a whale of a game, recovering his eyeglasses time after time, without a fracture. All the outfielders lost pounds of weight as they ran miles and miles through the hayfields and underbrush in pursuit of long hits. Kendall and Draper, the catchers, were probably the bravest men of all, for they faced the terrific speed of the pitchers without gloves, masks or body protectors. All players not specifically mentioned above are hereby assured that their playing was truly remarkable, and that without them the teams would have been unable to achieve any success whatever.

The score and line up:

KALS.	COMS.
Kalmus, Capt., 1 b.	Comstock, Capt., p.
Haynes, s. s.	Emerson, assist., s. s.
Langley, l. f.	Stevens, 2 b.
Holcombe, p.	Draper, c.
Stebbins, 2 b.	Haraden, 3 b.
Ferris, r. f.	Sanborn, c. f.
O'Connor, c. f.	Sutton, 1 b.
Russell, 3 b.	Sweetser, s. s.
Kendall, c.	Roberts, l. f.
	Hartshorne, r. f.

	1	2	3	4	5	
KALS.	1	0	0	8	5	14
COMS.	1	0	4	4	4	13

After the ball game, Langley defeated Comstock in the semi-finals of the tennis singles, after a hot contest, the score being thirteen to twelve. This brought Kalmus and Langley together in the finals. That was a contest worth going miles to see, the men being so evenly matched that after several hours play the score was even at thirty-seven to thirty-seven and it was decided that each man was entitled to one-half of the singles championship. It is hard to say which was the more finished player, as they were both carried off the court on stretchers.

Just before dinner Stebbins' family arrived in his car to take him back to Boston. He had such a wild ride up with Steve, that he 'phoned to Mrs. Stebbins to come up and rescue him from such a trip back.

These events had occupied the time until dinner, which was enjoyed as had been all previous meals. Soon after dinner the cars began to slide down the hill, each bearing a load of satisfied passengers, all of whom registered a vow not to let another reunion go by without their attendance. Everybody had one fine time from start to finish, and was sorry when it was over.

We had fine weather, a wonderful place to hold the reunion, and a mighty congenial crowd of fellows present, all of which combined made the fifteen-year celebration a grand success.

1905

GROSVENOR D'W. MARCY, Secretary, 246 Summer Street, Boston, Mass.
CHARLES W. HAWKES, Assistant Secretary, 25 Saxon Road, Newton Highlands, Mass.

F. F. Longley, now colonel, U. S. A., whose important work in connection with the water supply of the American Expeditionary Forces has been previously mentioned in the REVIEW, is now ranking officer in charge of a detail of two thousand men selected from seven thousand applicants to follow courses of study in English universities and educational centers before returning to America for discharge from the army. Many of these men are graduates, and none have had less than the equivalent of two years' college training in this country. The news item containing this information continues:

The students will be distributed according to their requirements, which range from engineering to theology, among twenty-two universities and colleges and about thirty other institutions, including the new fellowship of medicine which Sir William Osler has started in London for advanced research work in medicine. Special courses are to be established for them in many cases.

H. R. Robbins, captain, U. S. A., wrote from Peking on April 27:

As a bit of a contribution for the Tech '05 news, I might remark that I am leaving Peking tomorrow on the first stage of my return to Washington to receive my discharge from the military service, and should arrive there about the last of June.

I arrived in Peking to take up my duties as assistant to the Military Attache on October 24, 1918, and have been fortunate enough to see a good deal of the country since then: as far south as Hankow, on the Yangtse, as far west as the end of the Lung-Hai Railway at Kwanyintang in Western Honan, and as far north as Harbin and Vladivostok. I also had the pleasure of visiting Taiyuanfu the capital of the Province of Shansi, and meeting and talking with General Yen Hsi Shan, the model governor.

My plans for the resumption of my professional work after my discharge from the army are somewhat uncertain, but I may return to the Far East, as I have established good connections here, and like the country, and believe it has good possibilities. I have been devoting my spare time to improving my knowledge of Chinese and Russian, with satisfactory results. Until I decide where I am going to locate my address will be 1508 Elm Street, Manchester, N. H.

John C. Damon, lately major, U. S. A., has returned to civil life and is now with the West Penn Power Company. A more detailed account of John's work appears in this number under "Tech Men in the Public Eye." The secretary ran into him twice in khaki, once in Boston, where he was investigating threatened power shortages in connection with war contracts, and again in Washington where he was investigating the possibilities of finding a place to eat, which was about as difficult at that time.

Grafton B. Perkins, major, U. S. A., recently made a flying trip to Boston and Salem, on two days' leave before starting on a three months' trip to Siberia, where he will visit the various posts and stations of our forces in that country.

Rev. Sydney A. Caine will be in Boston for the summer, where he will be attached to the clergy staff of the Church of the Advent during the absence of Dr. van Allen abroad.

Roswell Davis is winding up his work at Princeton and with the aviation schools and in July moves to Beverly, Mass., to head a department on motorization with the United Shoe Machinery Company.

Roy Allen, lately captain, U. S. A., is now associated with Bill Spalding, who at last accounts was research engineer with the National Aniline and Chemical Company, at Buffalo. Roy's address is Church Street, East Aurora, N. Y.

Other changes of address are: Thomas P. Bedford, Fayette, Mo.—Robert Bixby, North Andover Depot, Mass.—Harry P. Charlesworth, 195 Broadway, New York City.—Lewis J. Lyman, 15 Ashburton Place, Boston, Mass.—Theodore P. Moorehead, Room 808, 30 North Michigan Avenue, Chicago, Ill.—George Wald, P. O. Box 1085, Phoenix, Ariz.

Suggestions are in order as to how we should celebrate our fifteenth anniversary. It is possible that there will be an All-Technology Reunion next year, but in any event it would seem that '05 ought to have doings of some kind.

There seems to have been a falling off in vital statistics lately. Whether this like everything else is attributable to the war or some other cause is not known to the secretary. He will, however, come forward with one item of his own, namely the birth of Oliver Murdock Marcy, on April 30, 1919.

1906

C. F. W. Wetterer, Secretary, 147 Milk Street, Boston, Mass.
J. W. Kidder, Assistant Secretary, 50 Oliver Street, Boston, Mass.

The assistant secretary requests all members of the class to note the change in the address of the class secretary. Wetterer is back in the Boston office of the Stone & Webster Management Association after having spent about two years as manager of the Tampa (Fla.) Electric Company. The assistant secretary perhaps has particular reasons for rejoicing over Wetterer's return, but the whole class will be glad to learn that the secretary is again on the job.

In the April Review mention was made of the form submitted to all members of the class for the purpose of obtaining war service records, both civilian and military. When these records were requested it was thought that the class might publish them in book form. It has since been decided that the Alumni Association will issue a War Record Book for the Institute, therefore the project of a 1906 book has been abandoned. The material already received from the members of the class will be of great value in the proposed book.

The Alumni Association intend to send a questionnaire to all former students to obtain data for this volume.

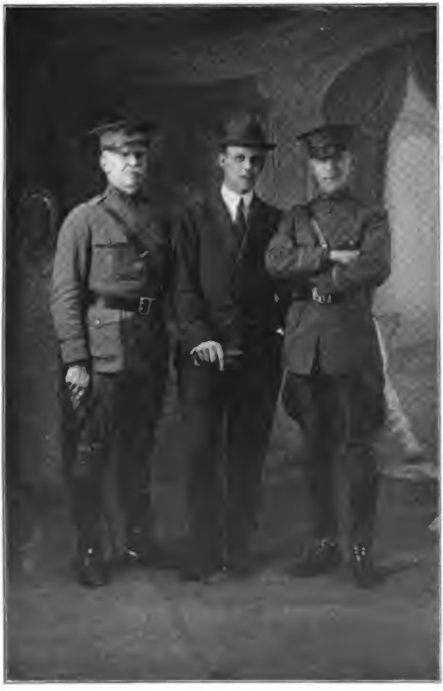
The secretary wishes to take this opportunity to impress upon every '06 man the importance of filling out the questionnaire and returning it promptly.

We know that Tech's war record has been remarkable and '06 has been well represented in the establishment of this record, consequently we want '06 to be well represented in this book; it will be if '06 men do their part in furnishing information, therefore please assist the editors of the book and do something for the glory of 1906 and Massachusetts Institute of Technology by giving the coming questionnaire all the attention it deserves.

In previous issues we have referred to Naval Constructor Ackerson's work with the Emergency Fleet Corporation. 1906 men will be interested to learn that he became director-general of that organization, succeeding Charles Piez who resigned to resume private business. Ackerson was ordered to the Emergency Fleet Corporation on July 27, 1917, in the position as assistant to the general manager. In April, 1918, he was made assistant director-general under Mr. Schwab and in August, 1918, became assistant general manager. In September he became vice-president, which position he held until his last promotion to director-general.

1906 has been further honored by another of the naval constructors included in our membership. In this case it is Lieut.-Com. Lewis H. Maxfield. The following account of Maxfield's exploit is taken from the Boston "Herald":

> Washington, July 14—Secretary Daniels has officially commended Lieut.-Com. Lewis H. Maxfield and Lieut. Frederick P. Culbert, two officers of the American Naval Aviation forces in service abroad, for their part in the rescue of American aviators who were caught in the wreck of a French dirigible balloon in which they were operating.
>
> In a letter to Lieut.-Com. Maxfield, commandant of a naval air station, who was making a flight in the dirigible to inspect the airship and its crew, Secretary Daniels wrote:
>
> "The courage and resource displayed by you after the wreck of the dirigible, particularly in the rescue of two of your men, are worthy of the gallant traditions of the service to which you belong."
>
> Secretary Daniels has made recommendation to the secretary of the treasury that a life-saving medal be awarded to Lieutenant-Commander Maxfield.
>
> Lieutenant Culbert was highly commended for the courage and initiative he



TROIS MOUSQUETAIRES

Major John H. House, '98, George C. Gibbs, '00, and Captain Carroll Bennink, '99

displayed in aiding in saving the lives of the two men who were in danger of drowning after the dirigible was wrecked.

The dirigible on which the American aviation officers and men were serving was escorting a convoy in the war zone when it got into difficulties. Efforts to right it were unavailing. The dirigible stood on the water, nose downward. As it struck, Chief Gunner's Mate L. E. Allely and Quartermaster H. A. Elliott, who were in the forward part of the balloon car, jumped.

A landward breeze began to carry the dirigible swiftly toward land. The shore was not more than a mile and a half distant. Allely and Elliott, both of whom were encumbered with heavy flying clothes, called for help.

At the risk of his own life Maxfield plunged in to the rescue and with the assistance of Culbert kept the two men afloat until a launch picked them up.

Lieutenant-Commander Maxfield was born in St. Paul in 1883, and was appointed to the naval academy in 1904. He was designated as a naval aviator, October 31, 1917, and has been for some time in service abroad. His wife, Mrs. Harriett Page Maxfield, lives in Norfolk, Va.

The war service records received recently by the secretary contain some very interesting items. Some of them are included below, although most of this information will be reserved for the alumni book.

Harold W. Beers, I, after having performed some important war work in supervising the completion of a $2,000,000 job at Camp Gordon, awarded to the Southern Ferro Concrete Company, of which Beers was vice-president and general manager, was commissioned a major in the Construction Division of the Quartermaster Department and was sent to Camp McClelland as constructing quartermaster. The work had just gotten under way when the armistice was signed and orders were received to discontinue the project. Beers was discharged from the service, December 13, 1918.

C. R. Burleigh, II, was commissioned a first lieutenant in the Engineers on November 5, 1918. He attended the Engineers Officers' Training School at Camp Humphreys, and on May 1 was commanding officer of Motor Transport Company No. 551 at that camp.

William Couper, I, has performed important service in the Construction Division of the army. Following is an extract from his service record:

> First reported at Cantonment Office on Sunday, May 22, 1917. Reported for duty on May 25, 1917, and performed office engineering service in Washington, D. C., until June 6, 1917, when assigned to active duty as commissioned officer. Departed for Columbia, S. C., on June 16, 1917, and served as construction quartermaster in charge of construction at the Sixth National Army Cantonment (afterwards called "Camp Jackson"), S. C. This camp was the fourth in size and as originally built contained one thousand five hundred and nineteen buildings, accommodated forty-four thousand two hundred and fifty men and cost about $9,000,000.
>
> On January 10, 1918, was transferred to Washington and served as supervising construction quartermaster with jurisdiction over twelve contracts, covering the construction of harbor craft for use at the various army terminals and depots. Two hundred and thirty-four boats were built at a cost of about $5,200,000. On October 13, 1918, was appointed officer in charge of construction at the North Columbia Cantonment, near Columbia, S. C. Because of the armistice construction was abandoned on this camp, which was to have been artillery training camp for thirty-eight thousand men, on November 30, 1918. At the time of completion the payments and obligation amounted to about $3,500,000.

When this record was submitted on March 4, 1919, Couper was located in Washington with the rank of lieutenant-colonel serving as officer in charge of the disposal of surplus material and equipment of the Construction Division of the army.

Floid M. Fuller, II, received a commission as junior lieutenant in the Naval Reserve Force on December 29, 1917. He was assigned to ordnance work and on February 11, 1918, reported to the office of the Naval Inspector of Ordnance, South

Bethlehem, Pa., as assistant inspector of ordnance of the Bethlehem district. On November 2, 1918, he was promoted to lieutenant and on March 13, when submitting his record, expected to be relieved from active duty in the near future.

R. W. Rose, XIII, has received his discharge as lieutenant (J. G.) United States navy, and is now in the automobile business in Boston.

F. R. Batchelder, VI, is one of the few '06 men to serve with the A. E. F. "Batch" was a member of the 401st Telegraph Battalion which spent fourteen months in France constructing the telephone system established there by the American army. The battalion returned to this country on May 24 and has since been discharged at Camp Devens. After a vacation Batchelder will resume his former position in the engineering department of the New England Telephone and Telegraph Company.

The marriage is announced of Arthur P. Watt, III, and Ethel May Morse on Wednesday, April 2, at Brooklyn, N. Y. Watt is a consulting metallurgist with the Missouri Metals Corporation at Mine La Motte, Mo.

News has been received that H. H. Cook, II, passed away at his home in Indian Orchard, Mass., on December 15, 1918.—Word was received May 20, 1919, from the postmaster at Brockton that James Hayes, Jr., had died.

1907

BRYANT NICHOLS, Secretary, 2 Rowe Street, Auburndale, Mass.

HAROLD S. WONSON, Assistant Secretary
Care of W. H. McElwain Co., Manchester, N. H.

Please note the changed address of the secretary; on June 16 he moved from Chelsea, having bought a home at the location given.

Charlie Coffin of Tech Show fame is to be found at 250 West 54th Street, New York City.—Ralph F. Knight, who is with the United Shoe Machinery Co., at Beverly, Mass., has an address of 21 Atlantic Avenue, Beverly, Mass.

Milton MacGregor became the father of Elizabeth MacGregor on February 27, 1919. This is his third child.

Lieut. Henry C. McRae, 207 Singer Avenue, Station E, Arlington, Md.—Alexander Macomber returned from overseas duty early in June, and has taken up his former work with Charles H. Tenney & Co., Managers and Engineers, 201 Devonshire Street, Boston, Mass. Mac looks finely and still wears his "French count" whiskers.

Ernest Miner wrote on June 2, 1919, giving his address as United States Housing Corporation, Dormitory J, Quincy, Mass.—Kenneth Moller is now in Boston, manager for Lockwood, Greene & Co., Engineers, 60 Federal Street, Boston, Mass. —Fred W. Morrill, 5859 Kennedy Avenue, Cincinnati, Ohio.

Capt. W. Watters Pagon, consulting engineer, Member American Society Civil Engineers announces that he has reopened his office at the new address, Lexington Building, Baltimore, where he will continue his previous practice as consulting engineer for bridges, buildings and other engineering work.

During the period of the war, Captain Pagon was assigned to the Construction Division of the army on the construction of Camp Meade, Maryland, and the Curtis Bay Ordnance Depot, South Baltimore, Md., as first assistant to the constructing quartermaster. Total expenditure nearly twenty million dollars.

Captain Pagon is a specialist in bridge and building work. He will have associated with him specialists in water, sewer and electrical design and power development. Reports, and financing of new projects.

On May 23, 1919, a letter was written from Tours, France, by Maj. Hugh Pastoriza, Ordnance Department, U. S. A. He says:

> As you see, I got over. I've been busy on engineering work in connection with design of the big railroad guns ever since I got in the army. Just now they have me working with the French trying to absorb some of the results of their experience with artillery so that we can get the benefit of it. I hope to get back to the States in a couple of months more.

Donald G. Robbins is with the Triplex Safety Glass Corporation, Mt. Vernon, N. Y.

On May 28, 1919, a son, Lyman Newell Robinson, was born to Mr. and Mrs. Winslow D. Robinson, of 10 Hyde Street, Newton Highlands, Mass.—A. F. Stevenson is now at 124 White Street, New York City.

During May a letter was received from H. E. Tresnon, from Owen House, Lancaster, England. Part of his letter follows:

> In June, 1914, I got married in England and returned to the States in July, and was intending to travel to the West, but decided when the war started that an Englishman ought not to travel westward when England was at war. I worked on shells with the General Electric at Lynn until the time that England started in the munition work in earnest, when I crossed to England, November, 1915. I worked on shells entirely from then till just before the end of the war when my health gave out. The next you hear from me may be from somewhere in the States. I was pleased to read that Crosby had five children and a new address. My total possessions are one wife and one pair of twins. The twins, a boy and a girl, were born in Boston, in September, 1915.

Tresnon sends a photograph of the twins, his wife and himself, and they make a fine looking quartette.

Raymond F. Conron, of Danville, Ill., died of pneumonia on January 23, 1919. There are no further details, as yet.

From the "Railway Age" of May 23, 1919, is printed the following interesting item about Robert E. Thayer:

> The Simmons-Boardman Publishing Company, publisher of the "Railway Age," has opened a new office at No. 85 Fleet Street, London, England. It has been placed in charge of Robert E. Thayer, who becomes European editor of all the publications of this company, including the "Railway Age," the "Railway Mechanical Engineer," the "Railway Maintenance Engineer," the "Railway Electrical Engineer" and the "Railway Signal Engineer."
>
> Mr. Thayer, until his recent transfer to London, was located in our New York office and was mechanical department editor of the "Railway Age" and managing editor of the "Railway Mechanical Engineer."
>
> Mr. Thayer has a technical education, a railroad training and a ripe journalistic experience. We have located him in London because it is the best point in Europe from which to gather information regarding foreign railways. But London will be merely his headquarters, and he will travel extensively in Europe in quest of the kind of material which will be of interest and value to our readers and patrons.
>
> For some time Mr. Thayer was employed by the American Locomotive Company as special apprentice and in the calculating department at Schenectady. He then entered the service of the Boston & Maine in the test department and was later instructor in mechanical engineering at the Massachusetts Institute of Technology. He became connected with the "Railway Age" editorial staff in January, 1911.

1908

RUDOLPH B. WEILER, Secretary, care of The Sharples Separator Co., West Chester, Pa.
LE SEUR T. COLLINS, Assistant Secretary, care of Imbrie & Co.,
13 Congress Street, Boston, Mass.

It is again our sad duty to report the death of another of our members, that of Russell Gilbert Crane on March 26, at New York, of pneumonia. After graduation he entered the employ of Parker, Thomas & Rice, Architects, of Boston, where he remained for about two years, then going to the office of Cass Gilbert of New York, where he was employed up to the time of his death. Mr. Gilbert has forwarded us a letter of appreciation of his services and character which shows that our late classmate had made a place for himself in the hearts of his co-workers, as it bears the signatures of twenty-four of his associates. Space prohibits the publication of the letter in full.

The post-office department has returned mail addressed to John Joseph Mullen, at Wellesley, Mass., marked "deceased," but we have no further information at this time. He was a member of the class in his sophomore year. Do not confuse this member with John Joseph Mullen of Denver, Colo.

The next issue will contain the complete list of the men who have been in the service. We make the following additions to the last publication:

Robert D. Hennen, first lieutenant engineers, commanding officer, Company E, 22d Regiment, until January 18, 1919, when discharged.

First Lieut. John E. Johnson, engineers, was still in France in April with Construction and Maintainance Forces.

A. R. Merritt was still in France in April.

George D. Whittle, first lieutenant Engineer Corps, 7th Engineers' Officers, discharged December 10, 1918.

Dwight Dickinson has been awarded the Distinguished Service Cross, and Croix de Guerre, as will be seen by reference to the last issue. Dickinson was lieutenant Medical Corps, U S. N. R. F., and surgeon of the 5th United States Marines, A. E. F.

Capt. Hobert W. French has returned from overseas where he had been advanced from first lieutenant of engineers to captain and assigned to the office of the chief of staff.

NEW ADDRESSES

H. W. Calder, The Poole Engineering and Machine Co., 50 Church Street, New York.—Arthur E. Bremer, 220 Broadway, New York.—Wilfred A. Morris, 14 Emerson Avenue, Crafton Branch, Pittsburgh, Pa.—Matthew Porosky, 125 Amory Street, Brighton, Mass.—S. Lock Davidson, Room 2, Beacon Building, Wichita, Kan.—John H. Locke, care of Commonwealth Steel Co., Granite City, Ill.—G. William Bailey, 552 W. 23d Street, New York.—Walter E. Caldwell, care of Walter E. Caldwell Co., Louisville, Ky.—W. Armour Johnston, Jr., Prince Bay, Staten Island, N. Y.—Myron M. Davis, 210 Water Street, Augusta, M .—Harold S. Osborne, 195 Broadway, New York.—William D. Milne, 141 Milk Street, Boston, Mass.—Clarence W. Clark, 7 Charlton Street, Everett, Mass.—Howard E. Batsford, The Solvay Process Co., Syracuse, New York.—Donald Bowman, Room 620, 72 West Adams Street, Chicago, Ill.—Stiles F. Kedy, Columbia Mills, Inc., 225 Fifth Avenue, New York.—Ernest Whitten, 40 Central Avenue, Lynn, Mass.—Carl H. Bangs, 8 May Avenue, Braintree, Mass.—F. W. Willey, 3415 Mooney Avenue, Hyde Park, Cincinnati, Ohio.—R. E. Manning, North Billerica, Mass.—A. L. S. Ferrandi, 14 Milton Avenue, Dorchester, Mass.—Edward A. Plummer, care of American Telephone and Telegraph Co., 195 Broadway, New York.—Franklin T. Towle, 74 Clement Avenue, West Roxbury, Mass.—Richard C. Collins, care of Alexander F. Crichton, Wilmington Mills, Wilmington, Del.—Willis H. Mason, 42 Broadway, New York City.—J. B. Stewart, Jr., 1226 Bryson Street, Youngstown, Ohio.—Alfred B. Babcock, 1301 Carroll Street, Brooklyn, N. Y.—James M. Talbot, care of A. S. White Dental Manufacturing Co., Prince Bay, New York.—Arnold W. Heath, 93 Boylston Street, Watertown, Mass.—Langdon Coffin, 88 Broad Street, Boston, Mass.—Lincoln Mayo, 1561 Beacon Street, Brookline, Mass.—W. B. Hunter, 37 Allston Place, Fitchburg, Mass.—Harry P. Sweeny, Fort Montgomery, New York.—Frederick A. Cole, 12 Pemberton Square, Boston, Mass.—Monroe Ames, 38 Pearl Street, Medford, Mass.—Matthew Cowden Hayes, 45 Manchester Place, Buffalo, N. Y.—Arthur O. Christensen, 99 Meserole Avenue, Brooklyn, N. Y.—Gregory M. Dexter, care of Honolulu Iron Works Co., Woolworth Building, New York City.—Ira G. Hersey, Jr., 78 Beach Street, Wollaston, Mass.—Orrin S. Lyon, care of William E. Hooke, 459 East 25th Street, Brooklyn, N. Y.—W. C. Folson, 2809 Erie Avenue, Cincinnati, Ohio.—Harold W. Griswold, 210 Farmington Avenue, Hartford, Conn.—George T. Glover, 1318 Lakewood Avenue, Lima, Ohio.—John H. Caton, 3d, 330 Norwood Avenue, Edgewood, R. I.

1909

Charles R. Main, Secretary, 201 Devonshire Street, Boston, Mass.

George A. Haynes, Assistant Secretary, 530 Atlantic Avenue, Boston, Mass.

TENTH-YEAR REUNION

The anniversary reunion was a distinct success, thanks to the fine support the class gave the committee upon whom the preliminary arrangements fell. Thirty-five members of the class went to Powder Point Hall at Duxbury, Mass., for the week end of June 20-23, and the class spirit was not confined to the men alone. For the first time, the class was honored by the attendance of one of the co-eds. Miss Luscomb came down for Sunday, and was duly initiated, much to the amusement of the boys.

It was altogether a very representative crowd, some coming from New York, one from Washington, one from Detroit, one from Pittsburgh, one from St. Louis, and one from as far west as Oklahoma. "Stew" Pearse's wife and little daughter also came down for Sunday.

Friday evening "Art" Morrill, who had spent about three years in China, where he was teaching civil engineering in the Pei Yans University at Tientsin, entertained the crowd by telling first in English and then in Chinese, a Chinese story teller's version of Jonah and the whale, and George Washington and the cherry tree. At least he said it was Chinese and the rest of us couldn't disprove it.

Saturday morning was spent playing golf, tennis, baseball, swimming, etc., and in the afternoon a couple of motor boats took us over to the beach near the Gurnet lights, where a real outdoor clambake was served. Some of the fellows went in swimming, but couldn't agree whether the water was fifty degrees or fifty-five degrees.

The tennis tournament of doubles in which all members participated was finally won by Gram and Davis, with Nickerson and Reeds as runners up.

Some of the party returned to Boston Sunday afternoon, the remainder going up over the road Monday morning.

The weather was ideal for the entire time, the hotel was good and the general opinion was that those who couldn't come missed one of the best outings, if not the best, the class has ever had. But no outing can be a success without the co-operation of all, and the committee desires to thank all those who assisted either with their cars or otherwise, to add to the pleasure of the occasion.

Those who attended were: Adams, Ballard, Belcher, Clifford, Davis, Dawes, Dewey, Dickerman, Faulkner, Finnie, Fisher, Gram, Haynes, Ingles, W. H. Jones, Miss Luscomb, Main, Marshall, Martin, May, Maynard, Morrill, Moses, Nickerson, Parker, Pearse, Pope, Reeds, L. C. Shaw, R. L. Smith, Spencer, Temple, Thornley, Wallis, Winchester.

"Mollie" (M. R.) Scharff was married on April 13 to Miss Jeanne Adler of Birmingham, Ala.

Ballard Burgher was married to Miss Grace Dexter of Dallas, Texas, on May 14.

"Carl" Jacobs and Miss Elise T. Darby of Germantown, Pa., were married on the seventh of June.

The engagement of Horace L. Clark to Miss Florence Baker has been recently announced. Clark is now in Chile.

The secretary has recently received word from D. P. Marvin. He has been transferred from the United States Ship "Denver" to the United States Ship "Tacoma," and has been promoted to the rank of captain, United States Coast Guard, which ranks with a lieutenant-commander in the navy or major in the army. At present the "Tacoma" is at Guantanano for target practice.

Under date of April 2, 1919, by direction of the president, the Distinguished Service Medal was awarded to Col. Bradley Dewey.

The citation reads as follows:

> Colonel Bradley Dewey, Chemical Warfare Service, for exceptionally meritorious and conspicuous service as chief of the Gas Defense Production Division in achieving under most trying circumstances remarkable results in supplying the American Expeditionary Forces with sufficient number of gas masks of high grade and of improved design.

The United States Artillery Journal has awarded first prize in its 1918 competition to Lieut.-Col. F. M. Green, who is at present in charge of the Coast Artillery section of the Reserve Officers' Training Corps at the Institute. Green's article is entitled, "Railway Artillery for Coast Defense."

It is with regret that the secretary has to announce the death of two more men of the class.

Priv. Raymond H. Fellows, I, was killed in action at Chateau-Thierry, on July 17, 1919. Fellows was a member of Company F, 101st Engineers.

Capt. Stuart Thomson, V, died of pneumonia on March 23, 1919, at his home in Brookline, Mass., having returned there from Washington only about three weeks prior to his death. For two years and a half he had been engaged on research problems for the Ordnance Department. He leaves a wife and a small son, Elihu Craig Thomson.

"Art" Shaw, captain 301st Engineers, has just returned from France, and expects to be discharged some time in July.

R. C. Glancy writes that he has not been in military service as was previously reported in the Review, but tnat he has been "supervising the telephone plant design for portions of Camp Dix, Hog Island, and various other shipyards near Philadelphia, together with the smaller jobs, such as storage depots for aviation, ordnance, etc." He was married in 1912 to Miss Alice W. Arnold of Marlboro, Mass., and has two "groundhands" and one "operator."

Theodore Elting Sharp was born March 30, 1919. Congratulations, "Chill"!

1910

DUDLEY CLAPP, Secretary, Gloucester, Mass.

There will be a howl when this REVIEW comes out, "Where are the 1910 Class Notes?" Your secretary has received one letter in the last three months — from Frank Bell. If the rest of the class care anything about the REVIEW notes, wake up and write!

Frank writes:

> Dear Dud: Just a short note to let you know I am alive and kicking and very much married as per attached announcement.
>
> Got my discharge from captain, Reserve Military Aviator, Air Service, U. S. A., last January.
>
> Since February have been doing some special work in an organizing capacity with the Bureau of War Risk Insurance and will probably be with them for a half year or so.
>
> Was not fortunate enough to get across, but have the usual hard luck tale, and was finally under orders when the armistice stopped me. Had quite an interesting time at the flying game in its various phases but as soon as the war was over I did not waste any time trying to get out, and succeeded.
>
> Give my best to the old crowd.
>
> Sincerely,
>
> FRANK F. BELL.

The following from the "Providence Journal":

> Captain Jenckes, who was graduated from the Massachusetts Institute of Technology, enlisted in January, 1918, and left Yaphank for overseas, where he began active service soon after his arrival in France. Captain Jenckes, who won three promotions while in France, fought at Soissons, Chateau-Thierry and in the Meuse-Argonne offensive.

"The Tech" got this:

> Captain Edward Stuart, who is on a detail with the American Red Cross in Serbia, has recently been promoted to the rank of major in the Sanitary Corps of the army and recommended by the American Red Cross for the Red Cross medal for highly distinguished service. The letter received by Professor Sedgwick from him says in addition, "Southeastern and Eastern Europe are certainly in a terrible mess after the war, and many years of reconstruction will be necessary to re-establish the place. I hope that after my release from the army I shall be able to come over again to help. I have received orders to return home for demobilization and expect to reach the United States in the early part of May. We have lately had a rather serious outbreak of typhus."

I saw Colonel Almy a few weeks ago. He and Bradley Dewey are going into business for themselves in Boston. They were associated in Chemical War Service work.

Another classmate whom I ran into by accident but did not have a chance to talk to was Jerome Scheuer. He was looking well and red-cheeked as ever.

1911

Orville B. Denison, Secretary, 63 Sidney Street, Cambridge A, Mass.
Herbert Fryer, Assistant Secretary, 162 Dartmouth Street, Boston, Mass.

ADDITIONS TO 1911 HONOR ROLL

Name	Course	Rank	Service
Colebrook, M. W.	V	1st Lieut.	C. W. S.
Hugelman, J. R.	I	Eng.	U. S. N. R. F.
Judd, M. H.	I	Ensign	U. S. N. R. F.
Lathrope, T. R.	VII		Sanitary Corps
Ofenstein, C. L.	I	Eng.	U. S. N. Exp. Avia.
Rhoades, W. G.	VI	2d Lieut.	Infantry
Roberts, W. L.	XIII		U. S. N., Const. Corps
Russell, F., Jr.	II	1st Lieut.	Ordnance Dept.

Through the good offices of the Woman's Auxiliary your secretary has learned the eight additional names above, making the 1911 honor flag total one hundred twenty-six. Additional information has been received concerning men already on the list as follows:

Name	Course	Rank	Service
Aaron, J. A.	VI	Corp.	Adv. Ord. Dept., No. 4, A. E. F.
Bakewell, D. C.	II	Capt.	O. D., U. S. R.
Drake, Whitford	XIIIA	Comdr.	Const. Corps, U. S. N.
Foster, W. D.	IV	2d Lieut.	40th Eng.
French, J. N.	IV	2d Lieut.	Aviation, A. E. F.
Hanson, R. T.	XIIIA	Comdr.	Const. Corps, U. S. N.
Harrigan, L. J.	XI	1st M. M.	U. S. N. R. F., A. E. F
Harrington, C. H.	I	Sergt.	301 Eng., A. E. F.
Kerr, C. P.	II	Capt.	A. S. S. C., A. E. F.
Lawton, S. R.	V	Capt.	C. W. S., A. E. F.
Nealey, J. B.	I	2d Lieut.	346th F. A.
Russell, Foster	II	2d Lieut.	A. S. S. C.
Strong, C. R.	IV	Sergt.	A. S. S. C., A. E. F.
Thompson, M. R.	XIV	Sergt.	C. W. S.
Walker, R. T.	IV	2d Lieut.	40th Engrs.
Warner, W. W.	I	Cand.	F. A. O. T. S.
Wood, Henry	IV	2d Lieut.	C. A. C., A. E. F.

Your secretary will reserve for the postscript notes the decision to be reached regarding the permanent record of "1911 and the War." A meeting of the Association of Class Secretaries has been called for this evening (June 12) and a class dinner has been arranged for one week later. Both these meetings will be reported in the p. n.

Mr. and Mrs. John Harris Scoville announced the arrival on April 19 (Patriots' Day) of Isabel Goff Scoville. Congratulations, John!

"Joe" Aaron, VI, is back from France where he served in the Ordnance Department. Yep, he didn't "W. T. D." but he called Dennie up!—In a letter from Montigny Montford, France, dated March 7, 1919, Oliver Powell, I, stated that he was still a sergeant but hoped his bars would be forthcoming following his abbreviated training school course, said abbreviation being due to the armistice. He is acting as editor of the book that the battery (Battery F, 309th Field Artillery) is to publish upon returning to the States, and is also on the committee which is getting out a regimental history, also to be published at the same time. He further says: "I did not have much faith in the university courses offered over here but believed that I would get more out of a course of reading of books from the American Library Association in Paris."—"Ed" Woodward, VI, wrote in April from Gievres, France, as follows:

> This will let you know I am feeling fine and working quite hard in the Transportation Corps at Gievres, which is the largest intermediate supply depot in France. Of course what interests me most is the date of sailing. I have communicated with the Tech Club at Paris, but so far have been unable to go there. Good luck and best wishes to you and all the boys.

Look in on the secretary when you return.—Capt. "Alec" Yereance, I, wrote from France in mid-March a splendid, breezy letter and described a chance meeting with "Tunny" Parker, XI, at an advanced engineer dump beside the road leading to Chattancourt. He saw a "W. S." on Tunny's arm and didn't know what it meant, but found it meant "Water Supply." In speaking of a visit to Paris, Yereance said:

> Please let me endorse the Tech Bureau and its activities highly: it is well known and liked throughout the A. E. F., as I have seen the Annex. Particularly I am grateful to the ladies of the Workroom who supplied the suit of unmentionables (well, evening clothes, if you like) which made bearable some chilly nights during the winter.

He is now on this side, having written on June 5 from Camp Dix.

Don Frazier, II, has completed his government work and since mid-May has been in Richmond, Va., where his former employers, the American Mutual Liability Insurance Company, have made him branch manager. He says he likes Richmond, except that it's awful dry.—The secretary had a fine chat with E. M. Young, I, who dropped in at 63 Sidney Street in late May. He had just completed his government work and had not settled down for the future.—Say, here's one—don't let on who told you, but listen: "Gutsie" Barker and "Groucho" Fryer have gone into business for themselves, the name of the corporation being the New England Dri-Kure Sales Company, with offices at 162 Dartmouth Street. Herbert Fryer is president and treasurer and Charles Morse Barker is clerk and manager. They have an exclusive Massachusetts agency for vulcanizing equipment and also carry a good line of tubes, tires and tire accessories. Best of luck to you, boys!—"Bill" Coburn, XI, has also gone into business with a partner, his partner being Francis W. Kittredge, a Yale and Harvard Law graduate. The name of the new concern is "Coburn, Kittredge & Company, Investments" and "Bill" describes it as "a newborn, though flourishing and rapidly growing financial power in the community, with offices at 10 State Street." Good luck, Bill!

The "Boston Record" of May 25 prints the following review:

> For an evening of unusual enjoyment we recommend A. Washington Pezet's, III, most entertaining novel "Aristokia," published by the Century Co. ($1.50 net).
>
> The scene of this unusual story is a strip of land which has been kindly set aside in Central Europe for the downtrodden kings, kaisers, czars, etc., of the days before the world war. In this strip of land called "Aristokia" the erstwhile sovereigns are allowed to live as they please, provided they treat their servants according to union rules. An American male beauty, who manages to get into "Aristokia" some way or other, and who falls in love with the best looking princess in the whole place, is the hero of the story. His adventures and misadventures while in this strange land of fallen aristocracy make up a story that is full of excitement and amusement from start to finish.

It might be added that the author is a former student of Harvard and the Massachusetts Institute of Technology. Also that he was formerly the producing manager of the old Toy Theatre, now the Copley, in this city.

T. S. Killion, '11, III, is now discharged from the service and may be addressed at his home, 130 Russell Street, Malden, Mass.

Thorne L. Wheeler, X, and John C. Woodruff, X, announce that they have formed a partnership for the general practice of chemical engineering under the firm name of Wheeler & Woodruff, with offices at 280 Madison Avenue, New York.

Postscript Notes

Sixteen members of the class of 1911 gathered at the Walker Memorial at an informal dinner, Thursday evening, June 19. There was also present one guest, Corp. Lowell Bond, of the 101st Field Artillery, and a member of the firm of New England Dri-Kure Sales Company. Corporal Bond, introduced by Bert Fryer, gave an interesting and graphic description of the action that the old Battery A saw in France, and it WAS action. The '11-ers present were: Joe Aaron, Gutzie Barker, M. E. Comstock, George Cumings, Dennie Denison, Groucho Fryer, Tommie Haines, Ned Hall, Jack Herlihy, Art Leary, Bob Morse, Frank Osborn, O. W. Stewart, Ted Van Tassel, Frank Wood and E. M. Young. Following one of Mrs. McLean's characteristic meals de resistance an enjoyable round-table was held. Those boys who had not before done so at a local class dinner told in brief their records since leaving Tech, and the service men told of their records.—Frank Osborn, III, started out in the mining game at Porcupine, Ontario, but following a disastrous forest fire he moved on to a silver camp near Cobalt, Ontario. Then a classmate, Archie Orem, wired him to come to Nevada, and so he joined the Nevada-Douglas Copper Co. for a while. He then went to Great Falls, Mont., where he was at work until July, 1913. Under a three-year contract he then went to Chile to work for the Braden Copper Company. Returning in July, 1916, he went to Quebec, where he has been busy on war supplies until the armistice. He is now working up a mica mine in New Hampshire, prior to returning to the copper game.—E. M. Young, I, started out on construction work in Waterbury, Conn., where he was with the Jason Leather Company until just after the entrance of the United States into the war. In answer to a letter Morris Knowles says he spent six or seven months assisting in the construction of Camp Meade, spending the balance of 1917 at the Curtis Bay Ordnance Depot. He was then ordered by Major Wallace to the Edgewood Arsenal, and later by Major Gage to assist in the erection of the Government Training School near by. The balance of 1918 he spent under Major Blanchard at Brunswick, Ga. He successfully passed an examination for captain in the Quartermasters' Corps, but the armistice prevented the granting of his commission. In January, 1919, he took a trip through Southern Florida. He is now back in the Hub, and is with Benchley & Fox, Inc.

By the way, O. W. Stewart told the secretary that Harry Lord, II, was now the proud father of a daughter, Mary Southworth.

Joe Aaron enlisted in the Ordnance in July, 1917, and was sent at once to Camp Meade, where he said it was hot as ——. Continuing, he said he sailed for France with the so-called "Fighting Ordnance Detachment," March 5, 1918. They landed at Bordeaux and went at once up just behind the front line trenches, where they formed Advanced Ordnance Depot No. 4. He was there until after the armistice. Joe told many amusing tales of the service.

Appearing for the first time, Bob Morse, VI, told the "story of his life." He started with the Pennsylvania railroad in Altoona, and four years later joined the Interborough in New York. A year later he went to Peru, South America, for a year and a half with the Cerro-de-Pasco Copper Company. In the fall of 1917 he enlisted in the Signal Corps and went to Camp Upton, L. I., and later to Texas, where he received a second lieutenant's commission. After a short stay at Camp Sheridan his company was ordered on November 1 to be ready in seventy-two hours to leave for France. On account of the forthcoming armistice, the orders were cancelled, so he never left this side. He is now at home in Brookline.

Jack Herlihy, II, was commissioned first lieutenant in the A. S. S. C. in September, 1917, and went at once to Kelley Field in charge of the 109th Aero Squadron. Stopping en route at Garden City, L. I., the squadron sailed for France in December. They at once established a permanent repair and assembling camp in Romorantin, France. Liberty planes were handled almost entirely at the camp for observation and bombing purposes. While there Jack got his captaincy. The squadron waited two months and a half at Bordeaux before returning home last May. Jack is now back with the Edison Company here in the Hub.—Art Leary, XI, tried for an ensign school in November, 1917, but was rejected on account of trouble with one of his legs. He later underwent a corrective operation and was then drafted into the C. A. C., being stationed at Fort Banks. He successfully passed the entrance examinations for a F. O. T. S., and was sent to Fortress Monroe, but the armistice stopped his schooling. He said he was one of four men who alone were successful out of a field of two hundred and fifty men in passing a trigonometry exam, three of the four being Massachusetts Institute of Technology men and the other man a Worcester Polytechnic Institute graduate. He considered this a pretty good boost for technical training.—Bert Fryer, VI, went to Washington in July, 1917, as purchasing engineer in cantonment equipment. Instead of going into the service with a captaincy he received in the Quartermasters' Corps, he joined forces with the Emergency Fleet at Hog Island. In March, 1918, he came to Boston as manager of the New England Supply Division of the United States Shipping Board. At the conclusion of the war, as told in the original notes, the New England Dri-Kure Sales Company was formed with Bert as president. He has now gone back to his first employers, the B. F. Sturtevant Company in Hyde Park.—It was the sense of this meeting that it is wise, as planned by the secretary, to omit publishing a book concerning "1911 and the War," at this time, saving the records, as compiled, for the big book "Technology and the War," and for the big ten-year book to be published in 1921. By the way, the secretary wishes to urge his classmates to return the questionnaires to be sent out from the alumni office as soon as possible, with all available data, however meagre, concerning military, naval or civilian war service. Speed, accuracy and completeness are the three vital things necessary.—Oliver Powell, XI, writes that he arrived in the States May 10, and was honorably discharged May 26. He returned as lieutenant in Battery F, 309th F. A., having been commissioned in March. Almost as soon as he reached Boston, May 31, he received a telegram from the general manager of Dunn & McCarthy, Auburn, N. Y., asking him to rejoin the company, so he condensed a proposed five-weeks trip into one and went back to work June 9.—Lieut. Carl C. Richmond, II, arrived June 18 on the "Agamemnon" with the 605th Engineers, landing in New York.—Hal Robinson, I, couldn't attend the dinner because he was on his vacation on Cape Cod.—Remember, classmates: Speed, accuracy and completeness—and the greatest of these is SPEED!

CHANGES OF ADDRESS

Capt. Harry S. Alexander, 369 East Buchtel Avenue, Akron, Ohio.—David P. Allen, 1326 East 25th Street, Des Moines, Iowa.—Cedric S. Anderson, West Pennsylvania Power Company, Pittsburgh, Pa.—Robert E. Anderson, Truedell Apartments, 231 East 4th Street, Cincinnati, Ohio.—John T. Arms, 70 Fifth Avenue, New York City.—Capt. Donald C. Bakewell, 912 Farmers Bank Building, Pittsburgh, Pa.—Charles M. Barker, 162 Dartmouth Street, Boston, Mass.—Allston T. Cushing, care of R. H. Cushing, Lancaster Heights, St. John Co., New Brunswick, Canada.—Capt. Richard W. Cushing, General Engineer Depot, 1419 F Street, N. W., Washington, D. C.—Lieut.-Col. Henry C. Davis, Jr., Benicia Arsenal, Benicia, Cal.—Clarence W. Dow, Braintree, Mass.—Com. Whitford Drake, Navy Yard, Puget Sound, Washington.—Rudolph Emmel, Casilla 655, Guayaquil, Ecuador, S. A., care of S. A. Development Company.—George B. Forristall, care of Foley Brothers Dry Goods Company, Houston, Texas.—Donald N. Frazier, 1215 Mutual Building, Richmond, Va.—Herbert Fryer, 162 Dartmouth Street, Boston, Mass.—Capt. John A. Herlihy, 72 High Rock Street, Lynn, Mass.—Howard P. Ireland, 60 Rotary Avenue, Binghamton, N. Y.—A. H. E. Kaufman, 185 Princeton Street, Lowell, Mass.—Edward Kennedy, 169 Beech Street, Holyoke, Mass.—Thomas S. Killion, 130 Russell Street, Malden, Mass.—Harry E. Lake, 40 Temple Street, Reading, Mass.—Stanley H. Lawton, 131 Monroe Road, Quincy, Mass.—Capt. Harold S. Lord, care of Ruggles Machine Company, Poultney, Vt.—Lieut. John L. McAllen, 328 Hassals Street, Portland, Ore.—Roy G. McPherson, Framingham, Mass.—William H. Martin, 1905 Woolworth Building, New York City.—Seymour M. Niles, 12 Orient Place, Melrose, Mass.—Morris Omansky, 15 Westminster Road, Roxbury, Mass.—Franklin Osborn, 2d, Eustis Mining Company, Eustis, Quebec, Canada.—Theodore B. Parker, Electric Bond & Share Company, 71 Broadway, New York City.—Foster Russell, West 2321 Boone Street, Spokane, Wash.—Hall Sargent, Grand Forks, N. D.—John H. Scoville, 3 Cottage Street, South Orange, N. J.—Capt. Roy A. Seaton, State Agricultural College, Manhattan, Kan.—Frank G. Smith, 108 Field Street, Torrington, Conn.—Lieut.-Com. Henry R. Snyder, 45 Mt. Vernon Street, Boston, Mass.—Lieut.-Col. Sidney P. Spalding, Fort Hancock, N. J.—Capt. Willson Y. Stamper, Camp Humphreys, Va.—Robert R. Stanley, Lincoln, N. H.—Maurice R. Thompson, 2408 Reisterstown Road, Baltimore, Md.—Guy W. True, Box 44, Balboa Heights, Canal Zone.—John B. Walcott, 734 Transportation Building, Chicago, Ill.—Ralph T. Walker, 231 Lenox Avenue, Providence, R. I.—William W. Warner, 172 West Perry Street, Titusville, Pa.—J. Craig Watson, Madoc, Ontario, Canada.—Lieut. Lawrence Watts, care of Col. Charles H. Watts, Fort D. A. Russell, Wyo.—Lieut. Russell D. Wells, Pottstown, Pa.—Thorne L. Wheeler, care of Wheeler & Woodruff, 280 Madison Avenue, New York City.—Sumner C. Willis, 47 Wheatland Avenue, Dorchester, Mass.—Ensign Robert O. Wood, Crescent Road, Concord, Mass.—John C. Woodruff, care of Wheeler & Woodruff, 280 Madison Avenue, New York City.—Erving M. Young, 11 Warren Street, Haverhill, Mass.—Joseph A. Aaron, 194 Rawson Road, Brookline, Mass.—Thomas H. Haines, 28 Radford Lane, Dorchester, Mass.—H. G. Jenks, 7 Peabody Street, Salem, Mass.—E. D. Van Tassel, Jr., 130 Franklin Street, Newton, Mass.—E. M. Young, 189 West Canton Street, Boston, Mass.

1912

RANDALL CREMER, Secretary, 7 The Circle, Rochelle Park, New Rochelle, N. Y.

Harvey Benson returned from France on Christmas eve. He is still in the service and expects to be for several months. He is located in the Trench Warfare Division, Office of the Chief of Ordnance, Washington, D. C.

Major Pierre Drewson was stationed at Fort Myers, Virginia, when last heard from.

Ward N. Gere was married on January 25 to Miss Mary Whitehead, daughter of Mrs. Herbert Shugatt of Lawrence, Mass. His brother, Lieut. E. C. Gere, '14, was best man.

Captain Chandler, now back from France, was a motor expert with the British Flying Corps during the Cambrai drive last April and May. During the action he received three machine-gun bullets in the calf of his leg.

Bates Torrey contributes his bit from 1410 S. Geddes Street, Syracuse, N. Y.:

> Since leaving school, I have been doing chemical engineering work for the Semet-Solvay Company. Although a greater part of the time is spent in Syracuse (enough to warrant my establishing my family here), I have quite a lot of work in connection with the dozen or more plants of the company outside of Syracuse which keeps me traveling about one-third of the time.
>
> You may be interested to know that there are two other members of M. I. T., '12, with this company: Murray Hastings, X, of Tech Show fame, and Bill Baxter, III. Murray has been spending about a year with the Ordance Department but is expected to return to his former work shortly. Bill Baxter is at our plant in Portsmouth, Ohio, after having broken the hearts of all the girls in Syracuse.
>
> We have a rather active Tech Club in Syracuse which celebrates once a month at the local University Club.

Ralph puts it in a slightly different way, writing from 2116 P Street, N. W., Washington, D. C.:

> I have been in Washington during the war, where every one has been so rushed and there has been so much confusion that I have not seen many of the '12 boys lately.
>
> I met in Baltimore last summer, A. G. Thompson on the day he received his commission at the Aberdeen Proving Grounds. W. G. Hammarstrom is chief engineer of the Lynchburg Foundry Company, Lynchburg, Va. G. B. Howard went to France as an officer in one of the railroad regiments and I have not heard from him lately.
>
> As for myself, I went with the Sullivan Machinery Company directly after graduating as a sales engineer and am now in charge of their office in Washington. I was married in May, 1917, to Miss Frances Burchell Burt of Washington and have made my home here since my marriage.
>
> If you or any other of the fellows ever get to Washington I hope you will look me up.

Walter Slade is now superintendent of power and lines for the Rhode Island Company, present address, 83 Grotto Avenue, Providence, R. I. He says:

> I have not much to tell you regarding myself. I spent nearly four years in the laboratory section of the General Electric Company at Pittsfield, Mass., and left that work on September 1, 1915, to take up the work which I am at present carrying on. I am now serving the Rhode Island Company, the traction company of the State of Rhode Island, in the capacity of their superintendent of power and lines. In this connection I am responsible for the power generation and distribution which involves power stations, substations, transmission system, distribution system, etc. Our main station has a generating capacity of about 40,500 K.W. and we operate 450 to 550 cars at peak load according to conditions.

Stalker Reed writes us from Ojuela, Durango, Mexico:

I can't help out much on the whereabouts and doings of other '12 men as I hear from very few. I've been watching closer the movements and doings of Villa lately, so you will have to put up with a few words on myself.

To begin with, we have a candidate for Tech about 1940 in our family now, and he sure is a dandy fellow, too. Due to the above mentioned Villa I didn't see him until the day he was six months old, but we've gotten pretty well acquainted since then.

As to what I have been doing, I have been with the Cia. de Minerales y Metales for the past three years and am now at Ojuela as assistant superintendent of the Penoles Unit, Ojuela mines. We produce fifteen thousand tons of lead ore a month, so I manage to keep busy and also feel that my efforts were a little help to the winning of the war. I sure envy the fellows who were "across"; we ought to have some mighty interesting talks at our next reunion.

Jonathan Noyes, Duluth, Minn., writes:

Walter O'Brien, Course II, is a lieutenant in the army and is in the Ordnance Department, and was in France the last I heard.

I met Donald Radford, Course II, at Duluth the other day, he having just returned from the service. He is in the lumber business, located here at Duluth.

H. I. Pearl, Course I, is located in this neck of the woods at this time. H. I. has two dandy youngsters and he and his family spent Thanksgiving with us at Duluth, at which time we talked over 1912 men in general. Pearl is a member of the firm of the Associated Engineers of Crosby, Minnesota, and they seem to be very busy. Pearl is as wise as ever, and is not limiting his field of action in this North Country as he is spending this month at New Orleans, following up some work for one of their clients.

I hear from V. G. Sloan, Course I, better known as Doc, quite frequently. According to Doc he was in the first flying boat that flew under all five bridges across the East River, New York; that means between the bridge and the water. Doc certainly must be degenerating into quite a butterfly as he speaks of flying across the Hudson River and across New York City all in the same breath. The real news regarding Doc is, however, that on Thanksgiving Day his engagement to Miss Marian Hill of Arlington was announced.

I have been the district manager for the Sullivan Machinery Company in the Lake Superior iron and copper country for over a year now and feel quite well located here at Duluth. I have a daughter three and a half years old and a son one year old.

My address is 910 Alworth Building, Duluth, Minnesota. Radford's address is Donald Radford, in care of Radford & Wright, Duluth. Doc Sloan's is V. G. Sloan, The Franklin, Hardenbrooke Avenue, Jamaica, Long Island, N.Y. H. I. Pearl's address is Crosby, Minnesota.

Harry Babcock sends us the following from 735 Michigan Avenue, Evanston, Ill.:

I got back from overseas on the 23d of December, and got home in time for Christmas dinner.

After I got out of the army, I pulled out for Chicago, and after a month or so took my old job back at the University. I am now Associate Professor of Physics at Northwestern and I like the job first rate. I am still fooling around with ammonia and guess I will be until I die. Hope to have my first paper on the subject out some time this summer. I have most of my time for research with a minimum of teaching, which is the ideal combination.

I went to France as a flyer, but like a lot of the other Cadets, I got sidetracked into aviation engineering. I had some flying but spent most of my time while at Tours running the engineering shops and overhauling engines. While I was fighting that battle I ran across Dave Benbow, and also saw Arch Eicher. The first of July I was ordered up to Paris and joined the Engine Division of the Technical Section. Professor Riley of the Institute was head of this division with the rank of major. It was pleasant to be associated with him, and I left Paris with a still higher regard for him as an engineer and as a man.

A little later I was made Officer in Charge of the Engine Sub-Division of the Technical Data Division of the Technical Section (some title!) and was in charge of writing and publishing the engine handbooks and related information. I got one of these finished, the 300 H.P. Hispano-Suiza, but the armistice came along and ruined the war and my hopes for publication at the same time.

Now that the war is over and I am back on the job the whole thing seems like a bad dream only; it is very hard to realize there ever was a war.

The Tech Bureau at the University Union in Paris was a great success, and owes its usefulness to the untiring efforts of Gibbs, who is a dandy.

Page E. Golsan, VI, is now assistant to the President of the Great Western Power Company in San Francisco, Cal.

Bartow V. Reeves, X, is 1st Lieutenant in the Ordnance Department, stationed at the United States Chemical Plant, Saltville, Va.

The marriage of Miss Helen Batchelder of Amesbury to Henry Noyes Otis, II, was announced May 31, 1919.

Walter H. Triplett, III, is now out of the service. He has just been married and expects to go back to his old job at Nacozari, Mexico, taking his bride with him.

From "The Tech" of January 18:

First Lieut. Herbert W. Hall, 44th Artillery, Coast Artillery Corps, was cited for extraordinary heroism in action near Thiaucourt, France, on September 27, 1918. Lieutenant Hall was in charge of a trainload of ammunition being sent to two eight-inch howitzer batteries in active operation against the enemy. Finding that part of the light railway track had been destroyed by enemy shell fire, he secured a detail of men under an engineer officer and worked with them to repair the track. When the engineer officer was killed by an exploding shell Lieutenant Hall assumed full charge and continued the work under heavy shell fire, showing utter disregard for personal danger, and inspiring confidence in men by his calmness, decision and courage.

The following article appeared in "The Tech" of December 28:

News of the death of Capt. Karl C. McKenney, '12, has just been received by his parents, Lewis T. and Katherine C. McKenney, 39 Chase Avenue, Auburndale, Mass. He died in France October 30 of pneumonia.

Captain McKenney was born in Charleston, Me., in 1890. He was a graduate of the Wellesley High School and of the Massachusetts Institute of Technology, in the Electrical Engineering Department, class of 1912.

He had been in the employ of Stone & Webster of Boston four years, in Houghton, Mich., and one year in the Public Service Corporation of Newark, N. J.

He enlisted in August, 1917. After three months at an officers' training camp, he received a commission as Captain and was attached to Battery E, 49th Artillery, C. A. C. He was ordered to Fort Andrews, Boston.

In April, 1918, he was placed in command of Fort Warren, which position he held until ordered to Camp Eustis, Va., to prepare his troops for overseas.

The fact that Captain McKenney was placed in command of Fort Warren, at that time the headquarters for all the forts in Boston Harbor, thus placing him at the age of only twenty-seven, and scarcely six months in the service, in charge of the defenses of Boston at a time when the nation was at war, with enemy submarines along the Atlantic Coast, testifies to his ability.

Captain McKenney was married in February, 1918, to Miss Virginia Courtney, daughter of Dr. Courtney, a prominent dentist in Hancock, Mich.

He was a member of the Wellesley Lodge of Masons.

The following is a tribute from the colonel of his regiment, Monte J. Hickok, Lieutenant-Colonel, C. A. C.:

"He died like the brave soldier that he was. We respect and honor the memory of Captain McKenney. We feel that he gave his life to his country as truly as though he had died on the field of battle.

"The courage with which he made the supreme test is an example to us all. We are proud to have had so noble an officer as a member of the 49th Artillery."

"Philadelphia Public Ledger" of January 14:

A chance acquaintance in the Midvale Steel and Ordnance Gun Plant, developing into a romance, culminated last evening in the marriage at the Temple Baptist Church, Broad and Berks Streets, of Miss Blanche G. Newell to Lieut. Edmund B. Moore, an assistant inspector of ordnance at the Midvale shops.

Of course, every one remembers Joe Champagne of Tech Show fame. We regret that lack of space forbids reproducing in full the articles appearing in the "Boston Post" beginning January 26, entitled "Can you Jazz? Learn in your own home how to do all the new fascinating steps."

We read on: "Here is a chance to learn from high terpsichorean authority the latest dances from Jazz to Military. Mr. Joseph L. Champagne, maitre de danse at the Copley-Plaza, will instruct Sunday Post readers how to do the Jazz, the Butterfly, the Bounce and the new military steps."

Follows the lesson, a little too intricate for us to comprehend with any degree of accuracy, but doesn't it beat all how the Tech training will fit you for anything? It's the technique that counts, of course.

In conclusion they give "A Word About Mr. Champagne":

> "Tech" graduates will remember Mr. Champagne's dancing in the college shows before he graduated in 1912. He is still better known as the composer of the alma mater song for 1917, "Oh, Institute Technology," at the time the Institute was transferred across the Charles. Until the war broke out Mr. Champagne remained in Paris, giving exhibition dances with the well-known Parisienne dancer, Mme. Bailleul. Returning then to Boston, he organized, with the co-operation and assistance of the late Mr. Eben D. Jordan, the Boston Opera School of Dancing, with the idea of creating a school of American ballet. "America," says Mr. Champagne, "has as much latent talent in ballet dancing as has been developed in the Russian and Austrian schools."

Captain Mabbot, Fort Winfield Scott, San Francisco, Cal.:

As you know I have a captaincy in the Coast Artillery and went to France with the 58th Coast Artillery Regiment, landing in France about May. Some one discovered I had had Trig., etc., sometime in my career, so I was sent off to study artillery in the fourth dimension at American Anti-Aircraft School near Paris and there I was side-tracked to become an instructor and fought the now famous battle of Paris, being decorated at the Folies Bergere, Casino de Paris and other famous places. However the decorating was mostly of the interior variety which we find is taboo when we return to the United States. My commission is in the regular army, so I am still in but do not know for how long.

The Tech Bureau in Paris was a most welcome proposition and Gibbs sure was on the job for the boys. I went to the front near Nancy for a week with an Anti-Aircraft battery, but at the time things were pretty quiet and the most exciting thing we did was to pull corks. A few months in France will teach most any one to be a first-rate corkpuller. The battery I visited was very nicely fitted up—a pen of rabbits for rabbit stew on special occasions. I was fortunate enough to be in Paris on July 4 for the American parade, July 14 for the French celebration and for the night of the signing of the armistice which was really quite a celebration. I started back to the United States on the 18th of November and pulled in at Newport News and I missed the wonderful sensation of seeing the Statue of Liberty. While in Paris I saw Babcock, Charlie Carpenter, Benson, Harold Davis, and one or two other Tech men of 1912, including Bill Lynch — Bill was working just about as hard as he always did. It seemed just as natural to meet a man on the Avenue de l'Opera as it would on Broadway. In fact when I got back to New York I was there for three weeks and did not see a man I knew. I was in Paris during a number of air raids and Bertha bombardments but never seemed to get real close to any real excitement.

I am now in the fog and freeze of San Francisco. Say, if we only had a few real good liars back East to boom the wonderful climate of New England like they holler about their junk out here the railroads wouldn't sell a ticket for Frisco once a month. I suppose some parts of California are better, but Frisco is mostly rain or fog. It is a lively town, however, for they have about sixty "holdups" and half a dozen murders a week. I guess this must be the "Wild West" they used to talk about. I have tried to find some 1912 men in this vicinity but Bill Lynch is about the only man and I think he is still in the East or in France.

We need to get a little of this California "bull" into our news and make ourselves and everybody else think that we are the only class that ever attended Tech.

Since I have been in the army I have lost track of things, but now that I am back in the States I hope to pick them up again.

I wish any 1912 men in Frisco would look me up at Fort Scott — I hope to be there for a few months anyway. I have another daughter, born December 12, 1918. This makes two daughters — both girls! I was down in New Jersey a couple of months ago and saw Harrod Griffin at the Ridgewood station. He is working for the railroad. I made a hurry trip to Boston but found most of the boys away in the army.

Lieut. L. A. Matthews is at Camp Pontanezen, Brest, France. He writes:

In command of Sanitary Squad No. 116 (twenty-six men) and with five other similar units, we sailed from New York, November 12, reaching St. Nazaire, November 25, and received orders for Squads 115-116 to proceed to Brest.

Lieutenant Schaeffer, in command of 115, and I were then given orders to design, construct and operate a delousing plant. The plant was in operation December 29 and has been doing fine work ever since. The process is a bath with a specially prepared soap and sterilization of the clothing by steam under seven pounds pressure and it "gets" the cooties without any question. We have five sterilizers each with a capacity of thirty bundles of clothing but seldom have to work to capacity as we delouse only those men "caught with the goods" by medical examiners. All the other troops go through a plant of much larger capacity in which the clothing is sterilized by hot, dry air.

It is a pleasure to help the boys get back, but I'll be glad when my turn comes.

Graham Cole, now with the Southern Pine Association at New Orleans, tells us:

I have recently entered the service of this association as Director of Safety and Industrial Relations, having resigned as Safety Engineer of the Maryland Plant, Bethlehem Steel Company, on March 1. Sunday I had the pleasure of meeting D. J. McGrath, on the train from Washington. He was also on his way to new work, having just accepted the position of assistant to president of Mobile Light and Railways Company, Mobile, Ala.

Scanlon is now assistant purchasing agent for the Newport News Shipbuilding and Dry Dock Company, 233 Broadway, New York. He writes:

No, I didn't get into the service. I caught a severe cold in the first draft and had so much difficulty getting transferred for examination from Massachusetts here that I frankly admitted to my board, which was particularly long, narrow and wooden, that war was everything that Sherman said it was, so they did everything possible to honor me with one of those jobs that pays $30 per day — once a month. However, six feet four and something inches is somewhat more than the standard depth of trench and the cost of changing the entire trench system would be, well — General Chowder said, "No," so I retrieved the dinner pail and climbed back up in Frank Woolworth's monument to the old job of buying insides for Joe Daniels' ferryboats.

But be that as it may, the war is now over in all but the strictest technical sense and I am beginning to find time to spoil good writing paper, so I hope to communicate with some of the old gang shortly.

I saw Sage at Squantum Plant just before Christmas. Married and has three youngsters.

Walker, II, was at Lake Torpedo Boat, Bridgeport, when I last heard of him.

Stone, II, is with Sullivan Machinery Company, in Washington. He has accumulated a line of talk on air compressors that makes the machine either very necessary or non-essential, depending on which way you look at it. I am certain, however, that the machine is as good in its way as Stone is in his and I would be glad to recommend them both to any one requiring air in the compressed form.

E. L. Homan, 1st Lieutenant of Engineers, writes from Brest:

At Camp Upton, Yaphank, Long Island, as a member of the 302d Engineers, commanded by Colonel Sherrill, I managed to while away the time from September 4, 1917, to March 29, 1918, teaching rookies squads east and west. Not an altogether disagreeable task since the drilling was interspersed with musketry, bridge building and other general military engineering works.

On the fateful day of March 29 my real war experience began. Every man was eager to leave for overseas, and when we left Hoboken and embarked on the "Carmania" every heart swelled with pride at the glorious deeds in which we expected to participate once we reached foreign soil. Our trip across was uneventful from a nautical standpoint, as no storms ensued, but from a social standpoint it was a distinct success, since we were accompanied en route by seventy telephone girls—dancing and spooning being quite "au fait." Since I was mess officer and below decks a good deal and as I am still heart whole and fancy free, I plead not guilty to the last indictment. Be that as it may, after picking up a British cruiser at Halifax, we landed at Liverpool on April 12, were railroaded to Dover, and after nearly losing my lunch in the English Channel, landed at Calais (vive la France) on April 14.

This period was just after the British retreat from the Cambrai salient and for two weeks it was an open question whether to send my division (the 77th) to the front line or not. The critical period passed over and I think luckily for us, as we were all greenhorns at this early date.

France appealed to us all as a land of stone houses and red-tiled roofs—a land undergoing very intensive cultivation. Our regiment was divided into two battalions of three companies each. One battalion billeted in a village called Meuncq-Nieurelet and the other at Ruminghen. My company, D, occupied the barn lofts of a well-to-do farmer and we officers lived in a small, cold Nissen hut.

We hiked for two weeks on practice marches and ended up each day with a battalion parade. About May 1 we moved and I was sent for two weeks training at an Australian Corps, where I learned a great deal about hand grenades and also about rare social proclivities of the "Aussies." Yes, indeed, the Australian officers were "hail fellows well met." Around May 20-22 we participated in a decision maneuver, having British officers as umpires.

About this period we were having "beaucoup" gas-mask drill and bayonet work under British sergeant instructors. On May 30, we hiked thirty miles inside of twenty-four hours and billeted at Locquinghen where we laid out some thirty-yard rifle ranges in near-by quarries. Then we marched and counter-marched until we entrained near St. Pol for the Bacarat sector. We arrived safely at Thion on June 12, and proceeded in easy stages through Rambervillers, Bacarat, to Pexonne. I shall always remember Rambervillers as the city where, as battalions billeting officer, I lodged my battalion in barracks, while my rival was forced to pitch pup tents in the rain (all because he ate lunch before seeing the Town Major). Well, we reached Pexonne all right under cover of darkness and discovered next day that several French batteries of seventy-fives were located near the village, even though it was still occupied by civilians. This was a so-called rest sector and we had relieved the now famous 42d, or Rainbow Division. About 3 o'clock the next morning we suffered an intense bombardment of gas shells and one platoon was annihilated by a box barrage that was concentrated on a small area. After this Hun greeting it was a real rest sector and our engineer company built artillery dugouts under occasional shrapnel fire and were going fine when I was ordered to the Army Engineer School at Langres with ten others on July 3.

It was a hard blow to leave my company at this time, as I knew and trusted every man. On July 11 I was ordered for duty with the 317th Engineers (colored troops), which is my present outfit.

J. I. Murray, 2d Lieutenant, Sanitary Corps, A. E. F., writes us:

Passed the Tech Club in Paris the other day on my way back from Coblenz, Germany, and saw a Tech Review, which brought to mind the idea of writing. Since last summer have been working on water supply with the 26th Engineers, checking up quality of water.

Went through the St. Mihiel drive O.K. and after several days at Thiaucourt in part of Metz, left for the Argonne-Meuse sector. Our outfits landed at Auzeville on September 20, six days before the big drive in the Forest of Hesse. We got shelled a bit here along with the others in the sector, and went forward on the 26th towards Montfaucon. We finally got moved as far forward as Cierges and stayed there until the November first drive, when we moved forward to Nouart, about ten kilometers from Buzancy, where we had our headquarters until the armistice. After the 11th we moved to Loney, about twenty kilometers in part of Verdun, which was battalion

P. C. at the time. From Loney we moved forward to Maville, joining the 32d Division, with the Army of Occupation, and moved overland to the Rhine.

We crossed the Rhine just west of Coblenz and were billeted at Oberhieber in the forward area of the bridgehead. The Boche were very sociable during the trip and didn't give the doughboys any trouble, for which we were all duly thankful. My regiment started homeward on January 1, but I was detached for service at the new S. O. S. clearing station Le Mono, where I expect to sit and watch the A. E. F. pass by. Alas! why does water need to be watched!

Mowry sends the following from the Construction Department of Swift & Company, Chicago:

I started with Swift & Company about two weeks after graduation to learn the construction and mechanical end of the business at their St. Joseph, Mo., plant, being inducted into the service as a sort of private in the labor gang. I spent just about four years in St. Joseph and construction work incident to a large modern packing plant of thirty-five or forty acres' ground space. In August, 1916, I was called up here to Chicago as an assistant in the Construction Department. Although there are large plants and interests outside, still all the administration and determination of policy emanate from the main office here. After about eight months the party with whom I was immediately associated went to South America to build a new plant there, whereupon I took his place as construction engineer and have continued in that capacity for nearly two years.

Like many others I know I had longings to see some of the active service catering to the downfall of the Huns. However, efforts to keep up with the military and civilian demands for meat supply called for strenuous efforts at home and so I feel I was identified with a war necessity, especially as the necessary expansion was unprecedented.

Possibly you will recall I graduated in the Sanitary Engineering Course, whereas my work with Swift & Company has been largely civil and mechanical. However, my field has been very varied and interesting and my experiences only go to show that any of the big courses of the 'Stute qualify a fellow so he can adapt himself to a widely diversified range of opportunities.

I have been happily married nearly two years now and know you will be pleased to learn that our family circle also includes an embryo engineer going on eight months old.

I have seen only two 1912 men lately. "Jake" Pratt has held a responsible position for some time with the Liquid Carbonic Company and understand he has recently been made general superintendent. You can address him at their plant, 3100 South Kedzie Avenue, Chicago. I also see J. A. Noyes occasionally when he is in town. He is district manager with the Sullivan Machinery Company, Alworth Building, Duluth, Minn.

More news from John Hall, now in the Sanitary Inspector's office, Headquarters Embarkation Camp, Base Section 1, A. P. O. 701, St. Nazaire, France:

Not more than ten minutes before receiving your letter of December 11, last evening, I had run across Lieut. William Lange of the Engineers, who said he had seen you in the not very distant past. He is on his way home after building camps and things over here, while I am among the unfortunates who are still on duty and shall probably have to stay until the last bugle calls.

Lange is only one of several Tech men I have seen here. Capt. Dave Benbow went on his way rejoicing a few weeks ago; Capt. C. P. Kerr, 1913, rested with us for a month; Lieutenant Carpenter, 1913, is stationed at the Base Laboratory down town. I came over with Lieut. L. A. Matthews of our class and Lieut. Robert N. Hoyt. Each had a sanitary squad like mine and they are now stationed at Brest and Bordeaux respectively.

You flatter me about my "success in military life." At the very best all I can say is that I have merely played around the edges of this war and done very little of importance. I am sure, to hear a gun go off would scare me to death. Briefly chronicled, my recent history is this: Left Camp Eustis, Va., in October and was put in command of a sanitary squad at Camp Crane, Pa. We did squads east and columns west for awhile and got together our overseas equipment. We loafed around Camp Merritt, N. J., for ten days, while news of armistices, imagined and real, whistled over our heads. Somebody decided we should come anyhow; however, who or why I haven't found out, and we landed here November 25. Since then we have done odd jobs at a couple of hospitals and are now helping the men get home. I am the sanitary inspector of the Camp, under the embarkation surgeon, and my squad of road-builders, miners, teamsters, and near-engineers have been transformed into clerks, orderlies and adherents to the peaceful arts of kitchen and barrack police. The chief indoor sport is wondering when we are going home. At the present rate of shipment of about one boat per week our hopes of going soon are not very great.

I am wondering about the more-distant future—if Tech has established an old soldiers' home or a bread line and soup kitchen for her repatriated and impoverished sons. A labor bureau might be a good idea with an assorted line of "Boys Wanted" on hand. Have you any need for an energetic and willing office boy? If so, I apply.

The following business notice has come to us:

LUIS R. GONZALEZ, B.S.
INGENIERO ELECTRO-QUIMICO
DE MASSACHUSETTS INSTITUTE OF TECHNOLOGY
MIEMBRO DE LA AMERICAN CHEMICAL SOCIETY

Tiene el gusto de informar a Ud. que ha abierto su Laboratorio Quimico equipado con todos los aparatos modernos necesarios para toda clase de analisis e investigaciones cientificas relacionadas con su ramo.

Especialidad en analisis de abonos, terrenos y productos minerales, con diez anos de experiencia en los departamentos de investigaciones de las grandes fabricas de abonos de Armour Fertilizer Works de Chicago, y Piedmont Electro-Chemical Co. de North Carolina.

Gustoso de poderle ser dealguna utilidad ofrece sus servicios profesionales y pone a sus ordenes su Laboratorio en la Avenida Ponce de Leon No. 198, Parada 21. Telefono 560, P. O. Box D., Santurce, Puerto Rico.

This is the real stuff.

Dave McGrath writes:

I got my discharge from the well-known and justly famous army of the United States of America on the 24th of February, and after a short vacation at home, accepted a job as assistant to the president of the Mobile Light and Railroad Company, in which job —I mean "position"—I have to make believe I know something about civil, electrical and mechanical engineering, law, accounting, finance and management. Of course I haven't any of those qualifications, but I have "something just as good"—Nerve!

The only class news I have concerns W. G. Cole, Course I, whom I met on the train on the way down here. He was going to New Orleans to take charge of all "Safety" work for the Southern Pine Association. As he promised me that he would write you, I shall let him speak for himself.

B. V. Reeves writes us from the United States Chemical Plant at Saltville, Va.:

I left the New Jersey Zinc Company and Palmerton, Pa., where I had been for the past five years, last May to take a commission as first lieutenant in the Ordnance Department. Was immediately ordered down here and here I have been ever since. This plant was only under construction then and I spent about three months breaking in enlisted men on the process at a near-by plant. When we did start up I was a department superintendent but the armistice came too soon for us and we never got to operating on a large scale although we kept going until January 5. And now for civilian life again.

Just one more bit of news. I expect to be married this summer to Miss Beatrice Roth, of Weatherly, Pa.

Kebbon sends the following from Camp A. A., Humphreys, Va.:

I am sending you herewith a short account of the alumni banquet held in the new Walker Memorial building (over the construction of which I labored, you will remember).

During the afternoon of the day of the banquet a few 1912 men appeared on the scene and one of the small rooms used for student activities was set apart for our class to congregate in. The only entertainment provided was an execrable band concert in the gymnasium, not necessarily the fault of the performers, but rather of the person who selected the gym for the musical program, for the reverberations were tremendous, and the notes of a succeeding measure returned to wrestle with those just issuing from the various instruments and went to the mat together in resounding discord. However, the noise served to draw a crowd like vinegar will flies—and it was not long before the music was drowned out by the hearty salutations of reunited classmates and Tech brothers. Gradually, the Walker Memorial filled to well-nigh overflowing and on the sounding of a bugle call — familiar now to so many of us—a general stampede was made for the big dining hall, splendidly adapted to such an affair, with its rows of noble columns flanking the sides and leading up to the great fireplace beneath the bust of General Walker, in front of which was placed the speaker's table with the class tables—filling the entire area and then some. For there were nearly seven hundred sons of Technology gathered together, many of whom have not seen one another for many years, and many in khaki with overseas stripes on their sleeves.

Our class table was placed near the entrance in the center of the back row where the cold drafts from the Charles now and then sent shivers up and down the spines of the less hardened, and I hate to think of the number of years it is going to take to move us up near the speaker's table where the drafts will be reversed. However, there were gathered together twelve lusty members of the Class of 1912 as follows:

Frederick J. Shepard, Jr., N. T. McNeil, F. H. Busby, Elliott Tarr, O. C. Lombard, "Johnnie" Lennaerts, J. S. Tirrell, H. E. Kebbon, Clarence Morrow, J. N. Morley, D. J. McGrath, Hugo Hanson.

We managed somehow to give as loud a cheer as any of the classes, and when it came to singing all eyes were turned towards our table, I trust because of the close harmony that issued forth. At any rate after the dinner, Dr. Maclaurin told me that he recognized me by the dark void caused by my opened mouth during the rendering of the Stein Song. The dinner was extremely well cooked and well served to those within hailing distance of the kitchen—which of course did not include us—but some day we will be able to get our dishes hot off the griddle when we have our eightieth reunion. Dr. Maclaurin gave a splendid word picture of the Institute's activities at present and of the pressing problems confronting him for the immediate future. President Morss also gave an interesting resume of the Alumni Association activities of the past year. But most of us left before a gentleman from Harvard —I forget his name—delivered his final crushing, telling point after several hours of a fervid speech on "Labor," as if we did not know as graduates of Tech what that word represented.

It was a most enjoyable occasion and it seemed mighty good to get back and feel the old spirit of good fellowship warming one's heart after the separations of the last two or three years—and as we say at camp at the conclusion of some wild poker party—"A pleasant time was had by all."

I am still at Camp Humphreys, but expect to complete a voluminous report on the architectural development of a Permanent Engineers' School and Post accompanied by a great many drawings, by May first, upon which date I have requested my discharge from the Engineer Corps and closely following thereafter I expect to locate in New York, to become associated with Welles Bosworth in the practice of architecture. In that case I may see you occasionally. Here's hoping.

From the Boston "Globe" of March 18:

March 18—Capt. Herbert W. Hall of the 44th Coast Artillery Regiment, whose home in in Winsted, Conn., and whose business is in Boston, today received at Fort Totten the Distinguished Service Cross for extraordinary heroism in action.

The presentation, which could not be made in France because of delay in certification of the award contained in army orders of January 21, was conducted with full overseas ceremony by Brig.-Gen. John D. Barrett, commander of the Middle Atlantic Coast Artillery District.

Captain Hall was decorated for "calmness, decision and courage" in carrying out under heavy shell fire at Thiacourt, France, September 27 last, the transportation of ammunition to howitzers in action against the enemy. He was then a first lieutenant.

Captain Hall is still in service, convalescing from a gas attack which affected his lungs.

Before Capt. Herbert W. Hall went into service, he was a hero of the Class of 1912 at Technology. In 1909, three fuses on a large switchboard, controlling the entire lighting system of Technology Union, 42 Trinity Place, blew out, setting the woodwork ablaze. Hall rushed in the dark to the switchboard, came in contact with a live wire and was stunned by the shock, but seized a fire extingusher and put out the flames.

In Tech he was interested in all college activities, was business manager of "Tech," member of the class football team and of the Electrical Engineers' Society, Cosmopolitan Club, Beta Theta Pi fraternity and tug-of-war team.

After graduation, he entered the employ of the Fuller Construction Company, later becoming a superintendent in Boston. In May, 1913, he became an efficiency engineer, with offices here. He was born in Cliftondale, April 2, 1889, and prepared for Tech at the Gilbert School. His father, Harry P. Hall, is a piano manufacturer, located in Philadelphia.

1913

F. D. Murdock, Secretary, 438 Huntington Avenue, Buffalo, N. Y.
A. W. Kenney, 1214 West Tenth Street, Wilmington, Del.

It was the secretary's pleasure to stand up with our old war horse, Bill Mattson, while he promised to obey, etc. The ceremony took place at Marlborough, Mass., June 7, and Miss Mabel Leighton is now Mrs. Mattson. Bill was discharged from the army a month ago, and is with the Babson Statistical Organization in Wellesley. On May 1, Ted Hersom was married to Clara P. Somes at Gloucester, Mass. The engagement is announced of Miss Mae Clark to Edward N. Taylor. Frank T. Smith, XIV, late lieutenant of Heavy Artillery, is engaged to Ethel F. Schuman. Smith is doing some temporary work for Professor Hayward. "Dutch" Franzheim, IV, the rascal, has taken to himself a wife. He was married May 12 to Elizabeth F. Simms, at Mt. Airy, Ky. "Dutch" was in the flying service and was discharged last December. He is now in Chicago with Weary & Alford Co. William F. Black, III, is engaged to Miss Miriam Stevens. So much for marriages. Now for results. George Richter writes us real proud that he is father of a bouncing boy, George A., Jr., born April 22. George remarks that he sure is a dandy and will enter Tech about 1937. George is back as chemical engineer for Brown Co., at Berlin, N. H. He was discharged from the Chemical Warfare Service on December 31, his rank being major. Bob Bonney, X, sends a picture of two healthy, good-looking youngsters. He is to be congratulated.

We come now to the most important matter of recording what our returned soldiers have come back to do. Caleb C. Pierce, IV, is practicing architecture, after having been a first lieutenant of Field Artillery. Allan S. Beale, I, was discharged last December from the Flying Corps. Clarence S. Roe is still in France, a captain of engineers. A short time ago he was transferred to the Transportation Corps doing railroad work in France. A. R. Atwater, VI, was discharged last February a second lieutenant and is now with the Salmon Falls Manufacturing Co. of Boston. Gardner Alden was a captain in the Quartermasters Corps and discharged April 7. He is a chemical engineer with the Dolge Felt Co. E. H. Smith, III, is still in the navy, a first lieutenant. At last that long silent wallaby, Eddie Hurst, has come to life. The first thing of importance to say about Eddie is that he is now a married man, having been married February 26, 1918, to Miss Harriet M. Case, at Hartford, Conn. This circumstance ought to give us reasonable assurance that Eddie is now somewhat tamed down. Every one who will know him will recall that he was a pretty wild young man at school. Ed was discharged from the service in January as a first lieutenant in the air service. He writes:

> After learning to fly I fought the Battle of Waco, Texas, in charge of Airplane Construction and Maintenance. Another Tech XIII man by the name of Crocker came to the flying field at Rech Field, Waco, Texas, and he was found to be so rotten they sent him overseas at once. Otherwise he was a mighty nice boy and gained distinction by making some blackboard sketches entitled "Faith," "Hope," "Charity" and "Purity." You know, Fred, Crocker painted a Tech Show Poster, and therefore he concluded that a sketch of Purity would or should be in his line. But Purity was somewhat bold in displaying her physical charms and the colonel thought so too. Crocker was court-martialed and I had the unique distinction of being the judge advocate. We certainly enjoyed the trial but poor Crocker failed to come across with anything but a mighty long face. Aside from "calling him down" for one hour and fifteen minutes and confining him to the post over Sunday, nothing was done to him. Well, Fred, it is easy enough to lose a live gang like the '13 bunch and a fellow really must step lively. In order to maintain your activities on our behalf I am enclosing the masuma requested. Let me hear from you and with kindest regards to your wife and family and trusting this finds all our old gang hale and hearty.

Albert Buck is a major still in the service. He has had charge of relief work in the Balkan states. He was formerly in Saloniki. He went abroad first with Dr. Strong to Serbia to aid in the suppression of typhus.

A. C. Goodnow, X, was discharged in March as a warrant machinist. He is now with George F. Goodnow, gas engineers, at Highland Park, Ill. Fay Williams, II, is a captain in the Ordnance Department. He states that he hopes to get out of "This Man's Army" very soon, and expects to join the staff of Scovell Wellington Co., Boston.

L. E. Wright, XIV, was discharged last December as first lieutenant in Chemical Warfare, and is now with W. B. Pratt, Inc., as chemical engineer in charge of construction. He writes:

> I am glad to get a Boston job and return to "Beantown." McDonough & Robinson ('13, Course X) are the only chemical engineers in Boston, according to the 'phone book. They are at 45 Milk Street, and are enjoying prosperity, though they just started in.

Ted Hersom, VI, was discharged from the navy as ensign in April. He is temporarily with the firm of Hersom Bros., caterers, at Winchester, Mass.

The secretary met John F. Foley, VI, at Bill Mattson's wedding. The boy is certainly the picture of health and seems to be enjoying life. He was discharged as first lieutenant on May 15, and has not yet gone into business.—Merwin H. Ward, XIII, was discharged last December as first lieutenant of Ordnance. He is now field director of Associated Industries of Missouri, with headquarters at St. Louis.—Mark W. Reed, IV, was discharged last February as sergeant in the Camouflage Section. He is now following his profession as playwright.

Edwin D. Pratt, I, was discharged in February, a second lieutenant of Field Artillery. Ed had more than his share of hard luck, but is now back on the job as aide to the general manager of the Childs Restaurant Co. He writes:

> I graduated from Saumur Artillery School under French direction and from heavy artillery school under American direction. I had the spinal meningitis; was out of active service three months, but one was a vacation, getting well at Nice, etc. Had Christmas card from Professor Spofford, met Macdonald at University Club, Paris, and several Tech men in same course with me. Tech Red Cross Aux-

iliary right on the job and Gibbs certainly made things attractive and cheerful for the boys who called on him. Never will forget the excellent services of the Red Cross at every stage of the game.

Phil Barnes, X, was discharged last December as an ensign. He notes:

> While in the navy I was assigned to engineering duties in connection with production of hydrogen and helium for kite balloons and dirigibles, interesting work. Released December 22, and am back on my old job in the New York office of the Pfandler Co.

"Twink" Starr, I, was discharged in May, a captain of Field Artillery. For the moment he is engaged in what he terms (loafing for myself). He is sorry that he hasn't a bit of news to send as he has just recently returned from a year in France. He says that he may get over it in time but doubts if he will ever be the same again. Francis H. Achard, VI, after refuting the secretary's implication that he might be a mummy, states that he is still in the service, a captain of engineers. Don Van Deusen, II, was discharged in May, a captain of Field Artillery. He is back at his desk as secretary-treasurer of C. A. Van Deusen Co. at Hudson, N. Y. He notes:

> I am not there when it comes to this remark stuff. I like to read the other fellows' but can't seem to spill any of my own.

Leroy R. Block was discharged from the navy in February a lieutenant. He is now with the Tileflex Metal Hose Corporation as assistant sales manager, located at Newark. Some time ago we heard from Tom Lough, I. He wrote:

> Better late than never. Have recently received my captaincy and am still in the Troop Movement Section of the General Staff S. O. S. at Tours. But within a few days I expect to be relieved from duty and ordered back to the States and hope to arrive in New York about April 1. Last month I spent three weeks in Italy on sick leave—wonderful trip. Stopped at Monte Carlo and Nice on my way back.

Dick Cross, VI, is probably learning to talk Spanish to beat the band. He writes:

> The April copy of the REVIEW has just come in and I realize that my annual report to you must be due. Only I am not sure that it is not biennial this time.
>
> From August, 1917, until December 15, 1918, I was one of the four million who disguised themselves with khaki, and incidently learned that the four years' grind at school has nothing on the work they expected of one at an officers' training camp. I chose the Coast Artillery Corps, and it proved to be just that; I spent exactly one year at Fort Constitution, New Hampshire, in all the grades from "shave tail" up to captain.
>
> My resignation was accepted in December, and I hustled back to the old job with the Aluminum Company in Pittsburgh. In a short time I expect to sail for Europe, and eventually land in Spain, where we are to open a new office in Barcelona. So I shall fool them after all, and see something of the other side. My address will be as usual, care of the Aluminum Company of South America, 2400 Oliver Building, Pittsburgh.

The following clipping was taken from "The Tech" of April 2, 1919:

> Lieut. W. Greenville Horsch, of Newburyport, Mass., son of Mr. and Mrs. William M. Horsch, who was recently discharged from the United States army, in which he had served in the warfare service, has gone to New York to attend the sessions of the American Electro-Chemical Society, now in convention there.
>
> Lieutenant Horsch was engaged in war work in Washington, D. C., Columbia University and at Niagara Falls, being associated with Major Wilson, a well-known chemical engineer holding a high place under the government. He has been selected to read an article descriptive of his chemical warfare work, which is accounted a high honor. Since receiving his discharge from the army Lieutenant Horsch has been engaged at the Institute.

Aubrey Burnham, VI, has recently opened a branch office as sales headquarters for the state of New Jersey, at 912 Kinney Building, Newark, N. J., representing the Lord Electric Co. and the Lord Construction Co., constructing engineers.

C. J. Berry, electrical engineer with the National Lamp Works at Cleveland, has resigned to take up engineering work with the firm of Brandt et Fouilleret at Paris, France. Mr. Berry has been with the National Lamp Works for six years, becoming connected with that firm after being graduated from the electrical engineering course at the Institute. During 1918 Mr. Berry served as a first lieutenant in the United States Air Service in France, where he undertook radio and aviation lighting work. While with the National Lamp Works he has been the inventor of several electrical devices for use on lighting distribution systems. Mr. Berry is an associate member both of the American Institute of Electrical Engineers and of the Illuminating Engineering Society.

The following notice of the death of Harold S. Birchard was sent to the Review office recently by his mother:

Harold S. Birchard, twenty-eight, eldest son of Mr. and Mrs. A. R. Birchard of 44 Lafayette Street, died in St. Vincent's hospital, New York, following a ten days' illness with pneumonia. Mr. Birchard was born in Norwich, Conn., February 19, 1890. He was graduated from Holyoke high school in 1906, and later attended the Massachusetts Institute of Technology. His business life was spent in Pittsfield with the General Electric and Berkshire Magneto Companies. He had just completed arrangements to enter business in this city. While in Pittsfield he was a member of the school committee. He married, November 21, 1912, Miss Ethel M. Harrington of this city, who survives him. Besides his widow and parents he leaves two sons, Stuart and Wesley, three sisters and four brothers, all of this city.

H. M. Laurence, III, writes that his term of military service was very brief as he was at Fort Slocum only two weeks and received his discharge fairly promptly after the armistice was signed. He is back in his old position with the Kenecott Copper Corporation at Latouche, Alaska.—E. R. Norton is a lieutenant commander in the navy, stationed with the Lake Torpedo Boat Company at Bridgeport, Conn. —J. E. Adler, X, was discharged as second lieutenant of the Field Artillery last December.—Sam Rogers, II, was discharged from the Field Artillery Ordnance Department in February a second lieutenant. He is back on his old job of insurance engineer with F. S. Smith Insurance Service, Boston.—Max Shafran, V, is still at the Watertown Arsenal as metallurgical chemist.—P. V. Burt, VI, spent ten months helping to keep the fleet supplied. He was not lucky enough to get any sea duty, but had some extremely interesting work, so he says, and plenty of it. He is back on his old job with Babson's Statistical Organization, Wellesley Hills, Mass.

Another of our long lost sheep turns up in the person of Franklin Hutchinson, Jr., X. He is in the Patent Department of the Western Electric Company of New York City. We can see Hutch blush when he wrote that he was married on June 15, 1918 to Miss Marjorie Rollhaus. He writes:

I feel as though I had but little right to try and break in on the class of '13 now, although I did in fact graduate with that memorable class. I'll bet that not one of the original bunch has held off so long before he deigned to write to his old friends of Massachusetts Institute of Technology. And the worst of it all is that I haven't got a decent excuse! But I have decided to reform, and plead to be allowed to get back in the best society "what is," that is—provided nobody has seen fit to read me out.

Three years ago I decided to abandon the life of a chemical engineer, and accordingly enrolled in the Law School of New York University from which I will graduate next Wednesday. I intend to devote my time from now on to the study of patent law. Know all men by these letters patent! During the war "my bit" was small—as I stayed at home like a great many others and tried to put my knowledge of chemistry to a useful purpose. Although we often heard it said that we are helping to biff Bill, nevertheless we stay-at-homes feel that the man who actually threw his very life into the mouths of the hellish man-consumers deserves the credit and praise. I hope that the fellows will enthuse in regard to the reunion in 1920—and you can just bet that I'll be there in the regular old-time spirit if I am still in existence.

Regards to all the members of Course X—including Kenny—and you might tell the latter that punning has about ceased.

A. E. Burnham, VI, extends an invitation to his classmates to visit him in Newark. He writes:

Last summer and fall, before the armistice was signed, I was in the field organization of the Lord Electric Company, engaged in getting delivery of the enormous quantities of the electrical material being installed at the navy and war office buildings at 19th and B Streets N. W., Washington, and while in that vicinity I had the pleasure of meeting a few Tech men who all seemed to be doing important work in the military service. Later, at Tulleytown, Pa., I was engaged in similar work in connection with making complete electrical installations at the Mamouth DuPont Loading Company's plant being built there.

Since then I have been in our sales engineering department at New York and recently have opened up a branch office for the Lord Electric Company and the Lord Construction Company at 912 Kinney Building, Newark, N. J., to take care of new construction developments in the State.

My company's president, Mr. F. W. Lord, and the chief engineer of the Lord Construction Company, Col. H. M. Waite, are both Tech men and if any of the fellows are interested in having first-class "Tech" talent install their plumbing, heating, electric work, and other mechanical equipments "we're it." Would be glad to have any of the fellows call on me when in Newark.

John H. Hession, I, claims to have the best concrete waterproofer on the market, "Ironite" is its name. John is in charge of the Boston office of the concern which is dealing in this remarkable substance. The only thing that the secretary knows about concrete waterproofing is that which he had from the lips of the eminent waterproofing engineer, "Twink" Starr. He asked Twink which was the best waterproofing for concrete and got this reply, "There ain't no such thing." But, of course, this happened several years ago, and John may have something at that. —D. V. Downs, II, is still an employee of the E. I. DuPont, DeNemours & Company as an assistant engineer, and is at present located at Flint, Mich., where their company is building one thousand houses for the General Motors Corporation.—Henry A. Burr, I, writing from Nashville, Tenn., states that he is still sawing wood and keeping his eyes open. He is figuring on coming up to Tech next June for a visit at the reunion. While on the subject of reunion, we might say that from several enthusiastic comments on this subject from members of the class, it looks as though everybody was keen for it and you can rest assured that we will pull off something real next summer. — The name of Graham Harris, X, appears on our class list. He is third concert master of the Detroit Symphony Orchestra. He has also made some very successful concert tours through this country.

He notes:

I don't know if this notice was meant for men who did not finish their course; especially if they left in order to embrace a line of work entirely foreign to technical matters. Music has always been my forte, but old M. I. T. '13 will always have a warm spot in my memory.

B. E. Brooks, IV, is an architect with the Youngstown Sheet and Tube Company at Youngstown, Ohio.—M. W. Merrill, XIV, after a short service in the army is with the United States Metals Refining Company of Chrome, N. J. We are glad that he had decided to stay in this country. He notes:

After getting out of the army the good old U. S. A. looked too good to leave, so I decided to cut loose from the Chile Company and appear to have been very fortunate in making my present connections. I surely hope that the wanderlust won't get me before next June as I most assuredly would like to attend the reunion in 1920.

Larry Hart, XI, is living up to the big things which we expect of him, and is now sales manager in charge of the Chicago branch of the H. W. Johns-Manville Company. He writes:

Last month, our former sales manager resigned and I have been appointed his successor. The Chicago branch covers the northwestern territory of the country, with jurisdiction over seventeen States. This broadens my work very much as I am now in charge of the sales of our entire line, while heretofore I was a department manager for only a few of our products.

Walter E. Merrill, XI, served for a short period in the army as second lieutenant in the Sanitary Corps. He writes:

Am still on the old job with the State Department of Health. Gage is also here since his return from France. Nothing very exciting to report. Hoping you are well and prosperous.

Don't fail to read what W. A. Bryant, I, has to say: He notes:

Was recommended for second lieutenant in Ordnance and was within three days of having orders sent me to report when Baker put through his order that no civilian of draft age could have a commission. Draft board subsequently put me in Class V. Therefore, I took a civilian job in Washington. Was with United States Housing Corporation, Department of Labor, as office engineer, becoming acting deputy district engineer at the close of hostilities. My work covered housing projects in the Hampton Roads district, Philadelphia and Quincy, Mass., although being office man I had a general knowledge of all the projects. My work was intensely interesting and ended all too quickly. Whereas most of the war workers hated Washington, I grew to like the place and I certainly hated to leave when my work was done. Perhaps it was due to the exceptional living quarters that I obtained and the very pleasant people I lived with, but whatever it was, I wish I could go back again for a bit. There is always something new to be seen again. I was in a position to become acquainted with some of our leading lights and therefore knew considerable of what was happening. People outside have little knowledge of what those near by think of our president.

After getting married my wife and I went to Washington on our honeymoon and had a most glorious trip home over the road in an automobile of a friend. Even though it was January, the weather was excellent.

At present I am hard at the structural concrete game and am doing the structural design of two large six-story buildings here, each costing about one-half million dollars. One is for the Noyes-Buick Company as a salesroom and service station and one for the Goodyear Improvement Company as a storage warehouse for the Goodyear Tire Company. Both buildings are designed by A. H. Bowditch, architect, who has come to us for the structural features. Believe me, it keeps you hustling good and plenty. Besides this, we have just designed a garage 250 x 70, two stories that is quite some job.

On April 5 Bob G. Daggett, XI, was married to Miss Louiseanna Hess, Vassar, 1916, of Louisville, Ky.—J. B. Woodward, Jr, is still with the Newport News Shipbuilding and Drydock Company as head of the engineering estimating department. He notes that he would like to know the address of O. M. Arnold and H. B. Harrison, both Course VI. If those reticent gentlemen will send their addresses to Woodward at 4875 Washington Avenue, Newport News, Va., or to the secretary, their courtesy will be appreciated.—H. P. Fessenden, I, states very briefly, "Am in New York on a big job and too busy to say much of anything."—Victor Mayper, I, has his own offices as consulting engineer at 15 East 40th Street, New York, N. Y.—That personal engineer, Si. Champlin, V, is now in the biscuit game. He writes:

I got fed up on soup and had to turn to crackers. If I had a dollar I would send it, but haven't heard of any food chemists getting rich on war business. Hope to be in Boston in 1920. Haven't seen the good old town since the fall of 1915, three and a half long, sad, lonesome years. Horsch and Merrill, both XIV, '13, went through our baking plant recently and I saw Atwater, VI, '13, a few days ago.

Paul V. Cogan, II, writes:

On leaving the "Stute" I went with the Fore River Shipbuilding Corporation and have been with them ever since, coming to Bethlehem when they centralized their engineering force here last summer.

I am not married and since no young lady down here seems to require the services of a first-class husband my chances of joining the benedicts in the near future seem rather slim.

In response to the remark: "Don't be a mummy," Lindsley Hall, IV, writes:

Thanks for the admonition. I may need the advice more than most of our class, inasmuch as I work among the mummies of the Egyptian Department of the Metropolitan Museum, and we've all heard of these cases of propinquity.

Last year I spent several months at my home in Portland, Ore., drafting for a shipbuilding concern, but after the signing of the armistice I returned to my old work in New York, and am now hoping to go to Egypt again this coming autumn.

If you are thinking of jumping off write to Florence Furniture Company. W. E. Caldwell, X, is general manager. He notes, humorously:

The above name is a misnomer, as we manufacture caskets and burial cases. While I do not wish any of the boys hard luck, still if they want to get measured in advance and have their wooden kimono ready for them tell them to write me. Am a partner in the above firm and expect to devote the rest of my life to looking after its growth. It is not a new concern but an old established one and a few of us have obtained all the common stock.

Just because we didn't tell Jim Beale, XI, where to send his dollar he is kicking. He states that we have a record of his marriage, and also that he hasn't changed jobs. Good luck to you, Jim!—Who in the world would expect such levity from an instructor of physics at Massachusetts Institute of Technology? Note the humor of Joe MacKinnon's, VI, remark:

All right, all right, you win. We will remain Rummy, but after July 1 we might just as well be a mummy. Old Rameses and his gang may still have some of their private stock on tap, even though they are nearer the Sahara than we are.

Halsey Elwell, II, was discharged from the army in December a first lieutenant of Infantry. He is now with the Walter M. Lowney Company, of Boston, Mass. Read the comment of Walter Palmer, who was a special student in our time at the Institute.

Too much Victory Loan, Salvation Army, etc., now, but will send the iron man soon. I want to state that although I was at Tech only one year and know practically none of the fellows, it was one of the important years, yes, the best spent year of my life. Having worked a year after graduating at Haverford College, I was very intent on getting back to work and did not avail myself of the opportunity of "getting in" with the 1913 Tech men. I wish that I had.

G. F. Haglin, II, was discharged from the army a first lieutenant. He is now with C. F. Haglin Sons Company, Construction Engineers of Minneapolis, Minn. It is interesting to note how the war was responsible for the saving of paper. G. F. Harmon, Special Biology, writes:

I have had an unusually busy year, and teaching in a medical school this year has been anything but easy. There have been many interruptions because of war activities and training. The head of the department in which I teach has been away on war service. This has meant that I have acted as head of the department. In addition I have been acting as chief of the Bureau of Laboratories and the Cleveland

> Health Department. It has been necessary to curtail research and thesis writing this year to a very marked degree. I have, however, found time to do some lecturing for the Red Cross on hygiene and related subjects.

"Ad" Cardinal, XI, was married March 1, to Eleanor M. Agnew. Ad is a full fledged manufacturer who speaks for himself. He writes:

> Quite a number of events have taken place since I sent you the last large check. My father died on February 22. I was married on March 1, and I have had a strike and settled it during the same period. Between getting out three income tax reports, looking for a place to live and keeping this factory going, the Jersey mosquito has not had a real chance to puncture me this season.
>
> Just at present we are living at the Arcolo Country Club, and intend remaining there until we get into our new home in Montclair, which will be finished, we hope by September.
>
> I thought that I might get to Boston this month to help my young brother Paul find the location of Tech, where he expects to go in the fall of 1920, but he is taking the college entrance exams near here, so the trip wasn't necessary this year.
>
> I'm sorry to say that I haven't seen any '13 fellows in quite a while, but now that the war is over I have hopes of running into a few in New York.
>
> If you ever get near New York and have a few hours to spare, tip me off and I shall try my best to meet you either in the big city or out here.

R. E. Palmer, II, was married December 24, 1918, to Miss Mary Heslop of Port Robinson, Ont. He writes:

> For the past two years I have been busy with the construction and operation of a plant at Thorold, Ont., for the manufacture of artificial abrasives, trade names "Exolan" and "Carbolon." In other words, converting Niagara power into rough stuff. July 1, 1919, I will start in with the Stevens-Duryea Automobile Co. just out of Springfield, Mass. Have enjoyed the past few years in Canada. I like the Canadians (married one), as they are the only people who hate the Germans worse than we do. Hope to see more 1913 Tech men at my new location.

E. E. Gagnon, II, having manufactured all the marble available in Vermont, is now production superintendent with some machine company whose name we might give you if "Mons" could write more legibly than he does. "Mons" wishes us to kindly advertise for the addresses of Shrimp Loeb, E. Bull Germain, Eddie Hurst, the Australian philosopher, and long Walter Byland. He writes further:

> I was in Boston March 1, but there was a conflict between the B. A. A. meet and the alumni feed. Me for the sports every time. A kindly gentleman got me a seat with the Back Bay highbrows and I demoralized them when we licked Dartmouth, and when young Bauden cleaned up the field in the six hundred, with my wild yells and whoops. They don't know what lungs are for; I exercise mine.
>
> Was in town again a week or two ago to the I. C. A. A. A. A. meeting. I generally approve of the way they run things and was satisfied with my trip.

William Guild, XI, is with the Beacon Falls Rubber Shoe Company in the Foreign Department with offices at New York City. He reports the birth of a son, William Guild, Jr., on November 12, 1918.—R. D. Bonney, X, is chief chemist with the Congoleum Company, a department of Barrett Company.

With deep regret we announce the death of three of our classmates: Thomas S. Manley died on March 13, 1918; William D. Stevens died of pneumonia at Aberdeen, Md., October 19, 1918; Edward D. Donald was killed by an accident in the British Forgings Limited plant at Ashbridges Bay, Toronto, in June, 1918. His father sent a copy of a letter written by his employers following his death. It is a letter which must have given a father a good deal of consolation.

Karl Briel, I, is in France and we hear from his sister that he was slightly wounded on September 29, 1918. From that time until the end of March of this year he was at the base hospital and later at various camps waiting to be sent back to this country. Before he got notice he was one of the eleven in his division chosen to attend a university in England, France or Scotland for a few weeks before returning, and he was assigned to the London School of Economics, London, England, where he is at present and has been since the end of April, but he expects to leave England July 6.

Tenney L. Davis, V, was discharged, a first lieutenant, in April and is now an instructor of organic chemistry at Massachusetts Institute of Technology. He notes:

> Overseas with A. E. F. for seven months. Pleasant times in Paris with George Gibbs and the Tech crowd—Christmas dinner at Cafe Cardinal.

Arthur E. Bellis, V, is now a major in the Ordnance Department. He has been at Springfield since June, 1917, organizing a metallurgical division in charge of all testing and heat treating; work which required building a laboratory and re-equipping hardening and annealing plants.

William E. Herron, II, is a very busy new man. His time is partly occupied in the various capacities of owner and manager of the Ford Shop and Agency, president of the Citrus Company packing house, and manager of the Aroca Edgewood saw mill at Inverness, Fla.—G. M. Rollason, X, was with the Canadian forces and also with the United States Engineers and United States Chemical Warfare Service. He was a captain at the time of his discharge in January of this year. He is now research engineer with the Aluminum Castings Company of Cleveland.— E. L. Bray, VI, is salesman for the Fairbanks Morse Company at Philadelphia. He was discharged from the army in December, a second lieutenant.

On December 19, 1918, fifty per cent of the girls in our class were married. On that day Marion Rice, X, became Mrs. R. W. Hart. Will the Wilmington, Del., papers please copy this intelligence?—Frank H. Mahoney, V, was discharged from the Air Service in February, a second lieutenant. William De Young Kay, VI, is in Central America for the Franklin Baker Company.—R. F. Gans is in the Army of Occupation of Germany as motor transportation officer of the 90th Division.— "Rusty" Sage, I, is now Southern manager of the Aberthaw Construction Company with offices in the Peters Building, Atlanta, Ga. He notes:

> Why the devil do you wait for a reunion until I go South? It's always my luck. Hang around Boston three years waiting for it to come off and then meet another postponement. However, I hope to be there.

W. G. Horsch, XIV, is a research associate in the Research Laboratory of Applied Chemistry, M. I. T. He writes:

> Arrived! A daughter, December 21, 1918. After a year of frequent change of abode while connected with the Research Division, C. W. S. I have settled at Waverley, Mass., and now divide my time between research, the baby, and a victory garden, really all research!

P. C. Warner, IV, is in the Naval Flying Corps, U. S. N. R. F. About himself he says:

> Commissioned ensign March 5, 1918. Promoted lieutenant (j. g.) October 1, 1918. Am a naval aviator, designated. At present I am the aide to Commandant Naval Air Station, Pensacola, Fla. Received my flight training at Key West, Fla., and completed same at Pensacola Naval Air Station. Expect to get out of service this summer.

S. D. Shinkle, V, was discharged in January, a first lieutenant in the Chemical Warfare Service. He is now a research chemist with the Goodyear Metallic Rubber Shoe Company at Naugatuck, Conn.—G. E. Leavitt, Jr., II, was discharged last

December, a second lieutenant of the Field Artillery, having been promoted from a private. He is still with the Southern Cotton Oil Company on the chief engineer's staff. He notes:

> Enlisted May 17, 1918, with 4th O. T. S. at Camp Devens. Was transferred to Company Zachary Taylor, Ky., when all Field Artillery units of O. T. S. were concentrated there. Commissioned on September 24, and retained as instructor in Field Artillery Central Officers'Training School until December 7, 1918. Enjoyed the experience very much. Tech may be considered a grind but let me tell you the training camps had something on Tech in that respect. Has any one heard from Gagnon lately?

F. H. Kennedy, Jr., IV, has started an architectural office of his own in Pasadena, Cal., and reports that he is doing a rushing business. Albion Davis, I, is beginning to feel lonesome in Keokuk. He writes:

> We are still in Keokuk on the Mississippi. The family is all well and fine. Our young daughter Eleanor will be three this August. It's been five straight years now for us in Keokuk. We hope to get back East on a visit this fall. I was much interested in the photograph of the Alumni Dinner in the April Review; '13 had a good showing as usual. It seemed good to see some of the familiar faces again.
>
> Work keeps me active and very busy. I have been doing considerable efficiency work of late, both hydraulic and electrical. I have been endeavoring to strengthen the little electrical knowledge we got in Course I with correspondence work, but find it hard to give the proper amount of time to it. I have taken up tennis this year, as a pastime, but as yet am only in the beginner class.
>
> Here's looking forward to seeing some of the fellows this fall and wishing everybody the best.

After spending eighteen months in the Chemical Warfare Service as a first lieutenant, H. R. Wemple, X, took a job with the Texas Gulf Sulphur Company in the sales department.—R. C. Thompson, X, is in charge of heel making at the Hood Rubber Company and he is anxious to have any members of the class who may be in his vicinity visit him at his new home. His telephone is Newton North 2479-W.

William C. Purdy, VII, is with the United States Public Health Service. He writes:

> In time of war the United States Public Health Service automatically becomes a part of the United States forces, by presidential proclamation, to serve wherever needed. In this sense I was in the service and was assigned to study methods of control of mosquitoes in rice fields near cantonment acres. The object in view is control of malaria.

K. B. Blake, XIV, was discharged in February, a captain in the Sanitary Corps of the Chemical Warfare Service. He is now chief chemist of the North Star Chemical Works of Lawrence, Mass.— R. F. Braly, I, was discharged in May, a first lieutenant of Engineers. He is now assistant engineer with the Emergency Fleet Corporation. He notes:

> After having been stuck in one camp (Shelby, Miss.) for the entire duration of the war was glad to get a change of scenery. In this town as in others the June-bug singeth, the buzz-saw buzzeth and the Whangdoodle mourneth for her first-born. Here, however, as a recreation we can watch Congress perform.
>
> P. S. My boy can lick any kid in the block.

E. D. Yerby, I, is a second lieutenant of Cavalry in the regular army. He likes the job and is thinking seriously of remaining on it.—H. I. Green, II, is a fire protection engineer with the Underwriters' Bureau of New England, Boston. He was discharged in December, a second lieutenant in the Air Service.—H. G. Burnham is still in the service and is expecting his discharge shortly. He intends to take a job with the George Close Company, candy manufacturers, of Cambridge.—H. J. von Rosenberg, IV, is still in the air service, a first lieutenant. He writes:

While in the air service my station was Ellington Field from December 15, 1917, to date, except for one month at Garden City, L. I., arriving there the day of the premature peace celebration, November 7, 1918. Being bound for the American Bombing School at Claremont Ferrand, France, as executive officer for the school. In this country I served as C. O. first Cadet Squadron, O. I. C. Theoretical Military Instruction, organized the Bombing School, made inspector and investigating officer, auditor and survey officer, assistant executive officer and summary court officer, and later chief engineer officer of the field. I am leaving the service on June 20, 1919, and will go into business with my father at Halletsville in merchandizing, banking, cotton and real estate. In addition I am superintending the construction of the new $65,000 school building.

T. J. Lough, I, was discharged in April, a captain of engineers. He is now construction engineer with the North Dakota Highway Commission. He has charge of highway construction on Federal Aid highway projects out of New Rockford, N. D. He writes:

Back to lavender Bostons, flappy trousers and bathtubs. The only features of army life in France that we have missed so far are the sunrises and cognac. Yesterday we saluted a colonel and in doing so, knocked our straw hat off into the mud which cost us three dollars and showed us what life in the army will do.

Miles Langley, I, was discharged in February, a lieutenant of Field Artillery. He is now with the Portland Packing Company of Portland, Maine.

M. J. Smith, VI, is still in the service. He writes:

It has been nearly four months since I came back from France. I could not get my discharge at once due to wounds received on October 2. But I have been busy, nevertheless, and just completed a manual on the "Sound Ranging."

I expect to be discharged about July 1, then I will have to get busy again. It is too bad that I can't get into civilians before June 30. There is a long dry spell coming.

I saw Phil Barnes in Washington not long ago. I recognized him at once, although I have not seen him since June, 1913.

It is about time to pull off a reunion and think we will all be ready for it by next year.

We have the following information regarding Dr. John W. Brady from Mrs. Brady:

Dr. John W. S. Brady entered United States Navy, May 1, 1917. Served at the Chelsea Hospital for three months, then was sent to New York to study under Drs. Flexner and Carroll. Afterwards sent to Washington Naval Hospital, then stationed at Newport Training School and was then put on an oversea transport until August, 1918, when he joined the United States Marines 13th Regiment, and is now serving with them in France. His address is F. W. S. Brady, Lt. M. C. U. S. Navy, 3d Batt. 13th Reg. United States Marines, A. P. O. No. 705, France.

E. O. Upham, XIV, is with the United States Rubber Company in the footwear manfacturing division. He is doing general planning and efficiency work.—R. L. Thomas, VI, is just back to this country and received his discharged in May, a captain of engineers. He expects to return to his old position as engineer with the Pennsylvania Water and Power Company at Baltimore.—I. W. Knight, VI, is electrical engineer for the General Fire Extinguisher Company at Providence. He is engaged in experimental and research work in connection with fire extinguishing apparatus. —M. W. Leonard after spending a year in France touring in box cars has returned to his old position with the Public Service Electric Company in their testing laboratory at Newark, N. J.

C. H. Sickels, II, is the proud father of a son, born on June 3. He is truck transportation manager of the Mexican Petroleum Corporation at Providence, R. I.—A. F. Brewer, III, is very enthusiastic over his new job, with the Texas Company. He was discharged in May, an ensign in the navy. He writes:

Could not keep away from examinations even in the navy. Right after enlisting they sent me to the United States Navy Steam Engineering School at Stevens Institute of Technology, Hoboken, N. J. where I graduated as engineering ensign. Got a corking course in steam engineering, really like a post-graduate course. Spent over three months in the war zone as Junior engineer watch officer on United States Steamship "Edward L. Doheny," third in the Adriatic and Mediterranean Seas. Sure did have some "Cook's Tour" via the navy. We touched at Newport, R. I., Port Arthur, Texas; Ponte Delgade, Azores Islands; Gibraltar, Messina and Gallipoli (Italy), Venice; Trieste, Pola and Spalato, Austria. Oh! it was a great way to see Southern Europe de lux, free. The only mar to our joys was the presence of Austrian mines in the Mediterranean and Adriatic Seas. They soon become common, however. We used our Otter Gear (mine cutter) a good part of the time and did most of our traveling in the Adriatic by day. Venice, of course, made the greatest impression on me. It's a wonderful city and I sure made best use of my shore liberty there.

I am now with the Texas Company in New York as a mechanical engineer with the export department.—Mr. W. W. Stevens, class 1898, at the Stute is my chief. Never has my future looked more encouraging, if I am able to make good in the oil game. The Texas Company is the best of concerns to be with, and I sure am digging in to make good and prove a credit to myself and to the class of 1913.

A. G. Waite, III, is a captain in the army, assigned to the office of Secretary of War. He is busy on re-employment work for discharged service men.—H. F. Sutter, I, was a cadet in the Aviation Section of the Signal Enlisted Reserve Corps when his discharge came last November. He now has charge of all the state bridge work for Nebraska with sixteen engineers in his department.

1914

H. B. Richmond, Secretary, 12 George Street, Medford, Mass.

1914 HOLDS FIVE YEAR REUNION

No class in the entire history of the Institute has experienced such a kaleidoscopic turmoil of world events in its first five years as a graduate class as has the Class of 1914. When at Trinity Church in the peace of that calm Sunday afternoon in June, 1914, Bishop Lawrence preached our baccalaureate sermon we little appreciated how prophetic would be his words. As we look back it seems as if his sermon was the very steeling of our being for the caldron in which we were soon to find ourselves engulfed. On the second day after we had been enthralled by that sermon we went forth into the world as Technology alumni. The industry of the nation was at a low ebb. Employment was difficult to secure, and within sixty days, before a bare half of the class had secured positions, nearly all Europe was ablaze with the greatest conflagration of ages. For a time the industry of the whole world stood aghast, then came the powerful reaction. Event followed event; then in April, 1917, the flame of strife spread to the United States. At the very time when we were starting our business careers and forming homes for ourselves we found it necessary to put them all aside and to take up that challenge which Bishop Lawrence had given us three years before — that even in our darkest hour must we never fail to enforce right over might, for out of our greatest struggle would come some great and lasting good. Into the war we went, from the submarines of the sea to the outposts of No Man's Land 1914 men were found. Two more years have passed and once again is peace returning to the world, but not without our having made that precious sacrifice. Fifteen of our number are represented by golden stars — among them are two of our former presidents. Thus we held our first five year reunion as a fitting close to a period of turmoil and sacrifice.

Reunion headquarters were established at the Hotel Brunswick in Boston on Friday, June 13. The program of the day was entirely informal, consisting of visits to the new buildings in Cambridge and of informal luncheons. In the evening a lobster salad buffet supper was served and a smoker and a lively business meeting followed. C. J. Callahan, who has served as secretary for the past two years, found it necessary to resign. Cal said that it is business and not marriage which forced him to take this step. H. B. Richmond was elected to take his place. Because of the many changes brought about by the war the class address index was found to be very much out of date. J. A. Judge, VI, agreed to furnish all printing and paper required to get the necessary information to correct this list. With such a generous start the secretary assures the class that the index will speedily be brought right up to the minute.

At this meeting the class resolved to place on record its expression of appreciation for those of its number who paid the supreme sacrifice during the war, and that the sympathy of the class be extended to the families of those men.

On Saturday, June 14, Class Headquarters was transferred to the Boulevard Hotel at Nantasket Beach. An all-day outing was enjoyed. A ball game, bathing, a trip through Paragon Park, and a big shore dinner were features of the program. The pleasure of the party was increased by the presence of the wives of several of our classmates. Those present were Mesdames Affel, Atwood, Merry, Perley and Zecha. G. K. Perley, Jr., age six months, was the youngest member of the delegation. Some difficulty was experienced by the fact that F. G. Perry, '09, formerly instructor in the Electrical Engineering Laboratory, was running a Sunday School picnic on the beach. Of course this fact did not bother the married men, but many of the members of our class are still enjoying single blessedness. When at 7 P.M. the party arrived back in Boston every one agreed that they would await eagerly the ten-year reunion when a big time is in store. PREPARE FOR IT NOW!

The closing date for this issue of the REVIEW had already passed before your new secretary took up his work. It was, accordingly, too late for him to collect any notes other than to report the events of the Reunion, a full account of which appears in the front part of this issue. However, you are promised that in the next issue the complaint will come from the editor because too much space has been taken, rather than from the class because there are not enough notes.

1915

WILLIAM B. SPENCER, Secretary, 527 North Grove Street, East Orange, N. J.

FRANCIS P. SCULLY, Assistant Secretary, 5 Exeter Park, Cambridge, Mass.

We can give no tribute great enough, pay no homage deep enough to honor the memory of our beloved classmates who have died on the battlefields of France, or in the service, for the freedom of their homes and their country.

Ralph Reed Malcolm, sergeant, A. E. F., whose home was in Stoughton, Mass., died on his way from France on the steamship "American," on March 6, 1919.

Lieut. Frederick S. Hartman, of the 345th Aero Squadron of the Second Army, was killed in an airplane accident at Toul, France, on April 7, 1919. His home was in Brookline, Mass. He came into national prominence in February, 1917, through his participation in the longest dog sled race in the world, the Red River-St. Paul Carnival Derby, five hundred twenty-two miles, from Winnipeg to St. Paul.

Lieutenant Hartman was killed in the Toul airdrome. He had just returned from a two weeks' furlough and had expected to be released from service April 15. He would have been twenty-nine years old on April 14.

He enlisted in November, 1917, and began training in aviation at the Technology ground school, later being sent to Ellington Field. He went overseas last October after specializing in various branches of the aviation service.

Fate certainly seems to deal harsh blows, especially when fellows have weathered the chances and dangers of deadly warfare only to be " taken west " just on the eve of the time when they will see their home shores and be greeted again by loved ones.

We extend our sincere sympathy to the relatives of Malcolm and Hartman and deeply mourn their loss as our classmates.

Capt. Douglas B. Baker has written us from the Army of Occupation briefly outlining a few of his experiences in the war. With his customary modesty he did not mention that he had won the Distinguished Service Cross for extraordinary heroism in action. We will let you read his letter first, then his citation taken from a newspaper clipping, and be glad that a fellow of his sort of stuff was a classmate in 1915:

> I'm not much of a correspondent, that is evident for this is the first time you have heard from me for eighteen months. The chronicle of my actions during that period is comparatively short.
>
> In spite of an infantry commission, a fatal tendency toward telephony landed me in the signal platoon of H. Q. Co., 80th Infantry, back in the fall of 1917. In February, 1918, an advance party from our division, the Third, was sent across to Chatillon-sur-Seine to school. I was at the signal school there.
>
> The 30th Infantry saw its first action early in June north of the Marne, then was shifted to Mezy about ten kilometers east of Chateau-Thierry, the souvenir center of the American tourists.
>
> The first two weeks of July were fine. Everything in the gardens was ripening; wild strawberries were plentiful and free fireworks every night until the 14th of July. The regiment stayed and later crossed the Marne, but I started a tour of France the next day because of a piece of shell in the hip, what the English very properly designate as a " cushy." The tour ended at Bianitz, where I spent six days late in September at the convalescent hospital. Bianitz is a wonderful place for swimming, so they say, but the pleasure was denied me for various reasons.
>
> I rejoined my regiment October 2 just north of Montfoucon and was lucky enough not to be wounded during October. At one time I was the oldest officer, in point of service with the regiment, on duty so you can see there were many sad changes in the personnel. We came back to be filled up with replacements early in November and were preparing to go in again when the armistice was signed.
>
> The longest hike of the war was that into Germany following the signing of the armistice. The outfit is still there and probably will be when you get this letter. I, however, am fortunate enough to be at the University of Lyon studying French and subjects which are useful in foreign business under the provision which our benevolent government has supplied to us. At every French University there are a number of American students taking a four months' course closing July 1. Those of us in the Army of Occupation return to Germany at that time; the rest go home.
>
> I have been much more fortunate in the army than I had any reason to expect, but nevertheless, I look forward to a return to civilian life as soon as possible. As yet, it has not been necessary to engage a secretary to care for the inquiries from anxious prospective employers.
>
> Remember me to the 1915 men you run across.

> For extraordinary heroism in action near the Bois de Beuge and Bois de la Poultiere October 9-15, 1918. During this period Captain Baker made several trips through heavy shell, gas and machine-gun fire, to repair broken telephone and tele-

graph wires, and when they could no longer be repaired, he personally carried messages through the shell-swept area. On October 15, he personally reconnoitered the Bois de la Poultiere, under heavy machine-gun and shell-fire in an endeavor to find a suitable place for his regimental post of command.

The secretary and Mrs. Spencer were pleased to receive a personal call from 1st Lieut. Parry Kellar, Ordnance Department, U. S. A., and his sister, Miss Kellar, in the latter part of May. Parry looked very well and seemed in excellent spirits. In response to the secretary's request for some " dope " Parry sent in the following letter:

When I visited you recently at East Orange, you brought up the matter of getting as many of the crowd as possible together next spring in Boston, to celebrate the fifth anniversary of our graduation. Thinking the matter over, I am of the opinion that it is good dope and propaganda should be started to help the cause along.

There are quite a number of Tech men in Philadelphia, but I have met very few of the class of 1915.

" Jack " Dalton is holding a responsible position in the Philadelphia office of the Liberty Mutual Insurance Company. I have been out to lunch with him on various occasions and he talks very enthusiastically about his work. " Jack " is also secretary of the Tech Club of Philadelphia, and is very active in its doings.

" Pop " Wood is with Stone & Webster, on the Hog Island project, and manages to get around to most of the Tech Club meetings. For some reason or other, Pop seems to like the Quaker City very much.

J. F. Guthrie is with the Abrasive Company of Philadelphia as mechanical engineer. Guthrie is married and has a very pretty home in Germantown.

Fred Hurlburt is with the du Pont Company in Wilmington, but occasionally is to be seen in Philadelphia.

In regard to myself, I am still in the army, and have been assigned to the Philadelphia District Ordnance Office for the last six months. I am doing appraisal and plant investigation work for the Philadelphia District Claims Board, and have found it very interesting. My work has taken me to such plants as the Bethlehem Steel Company, Baldwin Locomotive Plant, Eddystone Rifle Plant, and various others.

I expect to be discharged from the service about the 1st of July, but will be around town for a couple of weeks after that. Remember me to all the fellows and tell them to drop in to see me when they are in town.

Another interesting letter to Professor Sedgwick has been given us from Lieut. Forest J. Funk, United States Sanitary Corps, who was a student in biology at the Institute and has spent the past winter midst the rigors of the climate of Archangel. We quote his letter in part:

DEAR PROFESSOR SEDGWICK: Your letter of December 5 reached me yesterday, just two months old. It is a long call from England to Archangel, but it took only a few minutes at a conference in London to decide upon my coming. Sanitary science is still in the embryonic stage here and public health has not yet been conceived of. It is hard for one to imagine the spring and summer conditions, who arrived when the temperature registered fifty degrees below zero, Fahrenheit. The great Divena is now a broad snow field across which long caravans of one-horse droschkes laden with wood that costs $16 a cord, or teams of reindeer that seldom draw anything but their drivers. The white birches that line the broad streets are burdened with numberless crows, strangely bold scavengers that walk the sidewalks here as fearlessly and freely as do the pigeons the streets of Boston.

Churches wonderful without and gorgeous within adorn the whole city, but their splendor contrasts rather vividly with the squalor of many of their parishioners.

Immediately upon my arrival I was made sanitary officer of the American N. R. E. F. From the present indications I shall have my hands particularly full next spring. During the past month I have been supervising from the sanitary point of view the remodeling of kitchens and the construction of baths and proper latrines. I am now organizing a sanitary squad, the chief duty of which during the winter months will be the operation of baths and delousing plants which are being hurried to completion. I am specializing on delousing because of the constant danger of typhus in Russia. In a few days I hope to leave for an extended inspection of our front lines. At a movie the other night a scenic reel of many familiar places in Boston made me homesick.

Oliver G. Norton, our senior vice-president, has been promoted to captain in the A. E. F.

Lieut. Gabe B. Hilton of the 347th Field Artillery, A. E. F., was in the REVIEW office April 22, just before leaving for his home, 375 Washington Street, Oshkosh, Wis. He is now discharged from the army.

Another boost in the class roll comes with the announcement of the birth of Augusta Jordan Alger to Mr. and Mrs. Philip L. Alger on June 4, 1919, 5 Mercer Circle, Cambridge, Mass.

Mr. and Mrs. Everett Brigham have another baby daughter, born in the early part of June.

Theodore Main, son of Mr. and Mrs. Charles T. Main, was married to Miss Marion Hall at the home of the bride's parents, Mr. and Mrs. Frederic D. Hall, Winter Hill, Somerville.

Main enlisted in the Coast Artillery at the beginning of the war, transferring to the 26th Division. He has just received his discharge after eighteen months' active service in France. He is now connected with the Slater Mills at Webster, in which town Mr. and Mrs. Main will make their home.

Just before sending these notes to the REVIEW office we were grieved to hear of the death of Mrs. John M. Walker (Martha B. Wells). She died on October 10, 1918, in Brooklyn, N. Y.

ON THE PART OF THE ASSISTANT SECRETARY

G. F. Nixon, IV, was detailed on construction work overseas and spent the greater part of his time building hangars and aviation fields. The love of travel has gripped him and he expects to go out to California with no definite prospects, mainly for the sake of seeing the country.

Clive Lacy, VI, was a second lieutenant in the Aviation Section. He returned from overseas about the middle of May and when seen intended to enjoy life in National Glacier Park for a while before settling down to hard labor again. He expects to locate in New York.

Louis Zepfler, V, went overseas with the 55th Coast Artillery, but for the greater part of the time was engaged in chemical service in Paris. He liked it so well that he rather expected to return to France for the Standard Oil Company. It would probably be a good idea to have Louis around at the Class Reunion next year to explain the attractions which France holds for him.

C. Loring Hall, I, who for a while represented '15 in Hong Kong has returned to the old home town. After getting out of the service he went with the Westinghouse Electric Company and is now in their Boston office.

Weare Howlett, X, writes that he is a hard working man out in Kokomo, Ind. Weare is pretty modest in his statements but it is understood that he has had considerable to do in jumping the annual business of the Kokomo Tire & Rubber Company from $2,000,000 to $5,000,000 annually. Weare is now boasting of Mary Jane Howlett and having attended a reception held for the youngster on the first visit to Boston the assistant secretary admits the praises are justified.

Lester Morse, I, is one of those who keeps in touch very well. The following letter, headed McCook Field, Dayton, Ohio, dated May 29 was rather interesting:

> Have been here since February 10, and expect to stay for a couple more months. Had my discharge already to sign the 1st of March, and then changed my mind as a good position seemed to be pretty scarce and I didn't want to go back to the Public Service.

We are having pretty interesting work here and flying some besides which suits me fine as we get a decent place now. I am in the Sand Load Testing Department and expect to be transferred to the outside design soon. Will have to look after the recommended changes in the new planes. Have been flying D H's and Voughts and Ordnance Scouts since coming here and went on one Liberty Loan trip.

Didn't like the place much at first but am beginning to like it better now though there isn't anything to do.

There are a lot of Tech men (civilians) here in this department, but most of them are '16 and '17 men.

Heard from George Rooney the other day and he is still down at Bridgeport, Conn., but expects to leave by June 25. The boy tells me he has fallen and he is seriously considering taking the fatal step. They are all slowly falling.

Andy, I hear, is quitting the Public Service, though I don't know where he is going—haven't heard from him lately.

Have you heard any dope on any other fellows? Saw Henry Lieb and he was a lieutenant senior grade. Friebus is a second lieutenant out here in the Ordnance Department. He wants me to take him up and give him some stunts. He'll get enough next month if I can get a chance to take him up—to satisfy his curiosity.

What are you doing for excitement these days? Write when you have time and let me hear all the news. About four years ago this time we were all doing considerable worrying as I remember it.

George Rooney, I, called up the other night to confirm the statement in Morse's letter about his leaving Bridgeport. He expects to go to Virginia with the Cooper Company. However he denies emphatically the allegation that he is about to fall.

Jack Dalton, I, president of the class, is now assistant manager of the Philadelphia branch of the Liberty Mutual Insurance Company with offices at 22 South 15th Street, Philadelphia. Under date of June 16 the following letter was received:

I remember my threat to write you a long letter and I wish it were possible to give you a good bit of news. Unfortunately, however, I seem to be in a part of the country where members of the class of 1915 are not.

Pop Wood, I, is a regular attendant of the local Tech Club meetings and is at present, I believe, running the Hog Island Ship Yard. He threatened to be present at our annual Field Day on June 7, but evidently the heat held him up.

Brigham dropped in on me the other day on his way up from down South. He seemed healthy and happy and had considerable to say about boys he had run into in different cities along his route.

I was surprised the other day at the picnic to see Tom Huff who is now located at the League Island Navy Yard in Philadelphia. Tom, in fact, was chief custodian of the punch bowl on Field Day and spent considerable time running his machine between the Athletic Field and the Wenonah Military Academy, the headquarters, taking out full ones and bringing back empties. I trust that you will not become alarmed since there was nothing in it stronger than iced tea flavored with a little lemon, but with the temperature at about one hundred it went pretty well.

Frank Foster came to Philadelphia a few months after I did and is doing his best to prevent accidents in the plants which we insure. Much of his time is spent holding safety meetings and showing our safety movies. He could easily qualify now as a professional.

If you even hear of any of the boys coming to Philadelphia, don't forget to tell them to look me up.

Next year is the fifth anniversary of our graduation. The great world struggle, in which so many of our members were engaged, prevented the customary three-year reunion. We should therefore look forward to our fifth anniversary and its attendant reunion with redoubled enthusiasm. Keep June, 1920, open and whenever you see a '15 man, talk it up.

1916

JAMES M. EVANS, Secretary, 1916 16th Street, N. W., Washington, D. C.

DONALD B. WEBSTER, Assistant Secretary, 18 Clarendon Street, Malden, Mass.

No report received from the secretary.

The following interesting item is from the Boston "Evening Transcript" of May 7, 1919:

> The marriage of Miss Marion Hall to Theodore Main, son of Mr. and Mrs. Charles T. Main of Winchester, took place May 6, at the home of the bride's parents, Mr. and Mrs. Frederic Davis Hall, Winter Hill, Somerville. The ceremony was performed by Rev. Howard J. Chidley of the Congregational Church of Winchester, under an arch of bride-roses.
>
> Miss Eleanor Hall, the bride's sister, was the only attendant. Edwin Appleton Barnard of Cambridge, a cousin of the bridegroom, was best man, and the ushers were Charles Reed Main, a brother; John A. Tarbell, a cousin, and Walter I. P. Badger, all of Winchester, and Dr. Fletcher Hatch Colby of Boston, the two latter classmates of the bridegroom at college.
>
> Mr. Main enlisted in the Coast Artillery at the beginning of the war, transferring to the 26th Division. He had just received his discharge after eighteen months' active service in France. He was graduated from Dartmouth in 1914, spending the next year at the Massachusetts Institute of Technology, and is now connected with the Slater Mills at Webster, in which town Mr. and Mrs. Main will make their home.

From "The Tech" of May 14, 1919:

> Berthoud C. Boulton, who is a member of the Engineering Staff at McCook Flying Field, has been appointed as a special contributing technical editor of the "Aerial Age." Boulton's work has been in the Research Department, renamed this year the Structures and Aerodynamics Section of the Aeroplane Department, Engineering Division. His work has been on the stress analysis of aeroplanes, both those designed at McCook Field and the very numerous ones submitted for sand test, including the analysis of the wing cell, chassis, fuselage and miscellaneous parts. He designed and proportioned the structural members of the aeroplanes built at the field, and criticized and made recommendations for others that were submitted by manufacturers to the government. One of the most important phases of his work was the development of the present government methods of analysis. He has done a good deal in devising and developing new forms of construction and in adopting new materials to aeroplane work. He has also, been very closely in touch with the Testing Department, and has frequently been called upon to write the more important and difficult reports issued by the Testing Department.

Also from "The Tech":

> Announcement is made of the engagement of Lieut. Charles Rogers Lord, of Newton, a graduate of Technology, Class of 1916, now with the American Expeditionary Forces in Italy, to Miss Maria Azzeroni of Turin, Italy. Miss Azzeroni has been active in war relief work in her country and it was this way that the young people first met and began the romance which has brought about their engagement. Lieutenant Lord is the son of Mr. and Mrs. Charles E. Lord of Newton. Following his graduation from the Institute where he was popular in various undergraduate activities, he went to Italy to engage in business as a sales manager for the Allied Machinery Company, with headquarters in Turin. He has remained in Italy ever since and with the entrance of this country into the war activities, he enlisted for service, in which he has since been engaged. His headquarters are now in Rome.

1917

Walter L. Medding, Secretary, 601st Regiment, Beaune, France.

Arthur E. Keating, Assistant Secretary, 893 Seaview Avenue, Bridgeport, Conn.

No report received from the secretary.

The following is reprinted from the Boston " Globe " of April 12, 1919:

> " Camion Cartoons " is the latest contribution to the humorous side of the war. It is made up of letters and drawings sent home by Kirkland H. Day of Cambridge, whom Technology men of a few years ago will remember as a student artist who drew striking posters for the Tech Shows.
>
> Mr. Day landed in France, July 4, 1917, with the Tech Unit of the American Mission. Instead of driving ambulances, the unit was assigned to motor trucks, and saw active service, mostly around Soissons, until mustered into the American Army in October. Mr. Day was sent to the Reserve Mallet, a corps of seven hundred trucks, officered and manned by a mixture of French and Americans, attached to no particular army corps, but sent wherever there was trouble. The Mallet Reserve took Frenchmen to fill up the gap when the English were driven back last spring; it took reinforcements to the hard-pressed lines in Flanders; it carried part of the Americans who started the big offensive at Chateau-Thierry. Now it is in the Army of Occupation.
>
> Several letters and drawings from Mr. Day appeared in the " Globe " last year. He doesn't yet know that he is the author and artist of a book.
>
> The cartoons are some of the cleverest that soldier artists have yet produced. They are full of that unconquerable spirit that sees something humorous in being bombed from an airplane and can even see the fun of a camp haircut.
>
> Boston: Marshall Jones Company.

Lieut. Arthur R. Brooks has recently been promoted to the rank of captain in the United States Aviation Corps.

The engagement is announced of Miss Marion Octavea Keene of Hyde Park, Mass., to Calvin Wesson Hawes, of Wakefield, Mass. Hawes is now with the American Expeditionary Forces in France.

The engagement is announced of Miss Edith Rich of Hyde Park, Mass., to, Horatio Nelson Keene, also of Hyde Park.

Winfred W. Smith has returned from abroad. He was married on June 12 to Miss Marguerete Smith of Harrisburg, Pa. He is at present employed in the Research Department of the New Jersey Zinc Company of Pennsylvania.

Alvah E. Moody writes from 17 West Independence Street, Shamohim, Pa:

> After returning from France in February, I was stationed at Fort Hancock, N. J., until I resigned my commission in the regular army in April. I am now up here in Pennsylvania with J. H. and C. K. Eagle, silk manufacturers, trying to learn the silk industry. Haven't met any Tech men in these parts, but hope to soon.

The following is an excerpt from a letter of Capt. A. C. Carlton, III, of the Third Infantry, to Professor C. E. Locke:

> At present I have quite an agreeable assignment. I am commanding B Company of the 3d and have ten officers, two of whom are doctors, and two hundred fifty men under my jurisdiction. We are scattered over the State of Arizona, divided into seven detachments, and, with two exceptions, guarding mining camps in the State. The company headquarters is at Globe, Arizona, our camp being on the property of the Old Dominion Concern. The other mining towns at which we have detachments are Ray, Lowell, Jerome, and Miami. The two exceptions to which I alluded above are the detachments at the dams of the United States Reclamation Service—at Roosevelt and Granite Reef. The United States Reclamation Service has turned the dams over to an association of water users in Phoenix and the detachments are to be replaced by civilian guards within the near future.

Arizona seems wonderful to me after having been on the Rio Grande for fifteen months and I believe I'd like to settle here permanently in the event of my leaving the service.

Capt. A. C. Carlton, III, married Miss Mabel Caldwell Jones on May 28, in San Antonio, Texas. Present address, Camp Del Rio, Texas.

1918

David M. McFarland, Secretary, 626 South High Street, West Chester, Pa.
Julian C. Howe, Assistant Secretary, Box 372, Cohasset, Mass.

In this letter we hope to make up for some of the news that has to date been missing from the Reviews. In answer to a questionnaire sent out by the assistant secretary, we have been able to get in touch with some of the men.

J. M. Avery, V, served as second lieutenant, C. W. S., at Edgewood Arsenal, Edgewood, Md., on toxic gas production.

John W. Damon, XV, enlisted June, 1917, Company B, 101st Engineers, 26th Division. After attending the Engineer Candidates' School at Fort St. Menge, he was commissioned and assigned to the 317th Engineers, serving with them on three fronts. He was discharged from the service April 10, 1919. At present he and Bill Foster are with the Packard Motor Co. in New York.

F. H. Hopkins, I, is with the Sandy Point Shipbuilding Corporation at Stockton Springs, Me., as plant engineer.

H. F. Jermain, XIV, was a patrol pilot in the Naval Air Service at Miami, Fla., for six months, being commissioned as ensign. Later he served as bombing pilot at Pensacola until March 7, 1919, when he was put on ordnance work. His present address is 83 Sachem Street, New Haven, Conn.

John H. Chase, I, lieutenant, with the 318th Engineers, is still in France.

C. H. Tavener is with the Curtiss Engineering Corporation. His address is 17 Ash Street, Garden City, L. I.

Earle R. Pickett, VII, is still in France.

Lieut. F. A. Bermingham, IV, is still with the A. E. F. in France.

Jack Hanley, I, R. F. Grohe and Freeman, VI, and E. McE. Manter, II, are with the Factory Mutual Fire Insurance Co. of Boston.

Stuart H. Caldwell, II, received rank of warrant machinist in the Naval Auxiliary Reserve, February 25, and commission as ensign on May 28, 1919. Released from active service June 5, 1919. Present address 14 Ripley Terrace, Newton Center, Mass.

Earl P. Collins, X, was in naval aviation at Technology when peace came. After being at Squantum shipyard for three months he has returned to school for graduate work.

J. W. Kilduff, G. R. Fuller, XIV, and E. Berman were in Pittsburg working on tests for the Ordnance Department. Kilduff is now with Gray & Davis, Inc., working on the heat treatment of metals.

George E. McLaughlin, II, was metallurgist for the United States Cartridge Co., Lowell, Mass. At present he is working in Peabody, Mass.

Max Seltzer enlisted in Cleveland, Ohio, August 5, 1918, as a private in the C. W. S., working on the development of mustard gas at the Cleveland branch of Edgewood Arsenal. Discharged, December 17, 1918.

Waldo S. McGuire was with the Atlas Powder Co. at their ammonium nitrate plants at Reynolds, Pa., and Perryville, Md. At present he is with the United States Color and Chemical Co., Ashland, Mass. Present address, 4 Walcott Road, Revere, Mass.

H. Connett, X, is a captain in the regular army, C. A. C. He is now serving as a courier for the Peace Commission, with headquarters in London.

William P. Ryan, X, enlisted as a private in the C. W. S., and was commissioned second lieutenant in the Development Division. He was stationed at Cleveland, Ohio, Edgewood, Md., and Willoughby, Ohio. At present he is working for Col. F. M. Dorsey in the Engineering Laboratory of the National Lamp Co., and expects to return to Technology in September.

W. M. Bouknight, VI, attended the first O. T. C., Fort Oglethorpe, Ga. Commissioned second lieutenant and assigned to 81st F. A. Promoted to first lieutenant and assigned to 52d Infantry, June 1, 1918, and at present is with them in Germany.

S. H. Huang has been with the Curtiss and is now with the L. W. F. Aircraft Co., New York.

Z. T. Wang has been with the Standard, L. W. F., and is now busy on consulting work of aircraft in New York.

C. H. Chiang has been with the Sturtevant, Sperry & Gallaudet Aircraft Corporation and is now with the Buick Motor Co., Flint, Mich. Present address, 465 William Street, Flint, Mich.

H. R. Underwood is with the United Shoe Machinery Co. as a tool designer. Previous to this he was engaged in the same capacity at the Nordyke & Marmon factory, Indianapolis, Ind., working on the Liberty Motor, being selected for that work by the Army Personnel Board after enlisting in the army. Address, 77 Essex Street, Swampscott, Mass.

Lieut. W. H. Turner, U. S. N. R. F., is inspector of engineering material (aero), U.S.N., Packard Motor Co., Detroit, Mich.

Miss Boudy Lemp was employed as an architectural draftswoman by the General Electric Co., in Erie, Pa., resigning her position April 1 to return to Technology to complete work for her degree.

John Blossom Woodward, IV, is a lieutenant of the engineers in the Army of Occupation.

F. C. Spooner, II, spent one year at the Hog Island Shipyard as foreman on hull construction. Later attended the O. T. C. at Louisville, Ky., in Field Artillery and was discharged soon after the signing of the armistice.

E. W. Huckins, XV, was drafted and sent overseas with the 74th C. A. C. while waiting for an expected commission in the Engineers. In November he was sent to an officers' training school and received his commission. At present he is with the 310th Engineers engaged in road building at Fohren, Germany.

J. E. Rowe, II, was a second lieutenant, C. A. C. Address, Habishaw Electric Cable Co., Yonkers, N. Y.

W. A. Felsing is now adjunct professor of chemistry at the University of Texas. He was a captain in the C. W. S. engaged in work for the Offense Gas Division at Edgewood Arsenal. "He managed to serve over a month in the base hospital at Edgewood Arsenal for being too intimate with mustard gas — no wound stripes." Address, 3007 Washington Square, Austin, Texas.

Nelson A. Bond, XI, was commissioned ensign U.S.N.R.F, October 23, 1918. Address, Jefferson, Maine.

F. L. Churchill enlisted as a seaman in the service of the United States Shipping

Board, April 26, 1918, and was discharged January 18, 1919, with the rating of Quartermaster.

G. B. Hutchings, Jr., enlisted in the navy December 4, 1917, and was detailed at Naval Aviation Detachment in charge of Motors Department from May to September. Was sent to Miami, Fla., for flight training for three months and from there to Pensacola. Discharged April 3, 1919. Address, 123 Prospect Street, Stamford, Conn.

E. C. Miao, I, has been working as a draftsman under the supervising engineer of construction Camp Eustis, Va. He plans to return to China in September.

William A. Jones, I, is with the American Smelting and Refining Co., Maurer, N. J. He attended the fourth O. T. C. at Camp Lee and received a commission. Discharged from the service April 12, 1919, after being stationed at several camps in this country.

Roy L. Johnson was in the Air Service, U. S. A., from July, 1917, to December, 1918, and second lieutenant when discharged. Adddress, Randolph, Vt.

R. P. Miller writes:

> I have been Steam Engineering Inspector in U.S.N.R.F. Aviation Section, working on the production and inspection of power plants HS-2 flying boats at L.W.F. Engineering Co., College Point, and was responsible for the perfection of the power plants on the NC boats which flew to the Azores. Was at Rockaway constructing these boats for four months.
>
> A. E. Tuttle is first assistant to the Inspector of Engineering Material, New York, and has handled aviation power plant inspection office since April, 1918.

Bill Wyer, XV, writes from Washington, D. C.:

> Have run across some of the class on the street here lately. Lord, XV, is on a construction job at the Naval Proving Grounds below the city. Macheca, of Monthly fame, is in the Torpedo Test Section of the navy and is awaiting his discharge. R. Rowe, I, is the only second lieutenant in the Chief of Engineers' Office where he is writing the history of the war. Lord was found roaming F Street, which bears a close resemblance to Tremont. Mac was of course discovered in a movie while Bobby Rowe is married and his wife lives here, so he has to be good. Bill's address is 1523 22d Street, Apartment 3, Washington, D. C.

Richard Rimbach, I, enlisted in Engineer Reserve, January 24, 1918. Entered active service September 1, 1918. Discharged from Engineer Officers' Training School, Camp Humphreys, Va., November 27, 1918.

Elliott D. Harrington, VI, served fourteen months in the 16th United States Aero Squadron, being commissioned as ensign. He was instructor in gunnery at the Seattle School, transferred to the San Diego Air Station and then on coastal patrol between San Diego and San Francisco.

H. B. Morrill is an ensign in U.S.N.R.F., looking forward to being discharged. He drove an ambulance with the French army at the front from December, 1916, to June, 1917, and has been in Naval Aviation since March, 1918. Address, 184 Amity Street, Flushing, L. I., N. Y.

The following men are reported as still being in France: Charles E. Poirier, 254 Cedar Grove Street, New Bedford, Mass., Lieut. H. W. Long, Corp. Francis G. D'Arcy, James M. Bugbee, Frank R. Moore, Edward S. Carter and Harold B. Butler.

Clarence C. Fuller was Inspection Engineer with the Ordnance Department, and later was transferred to the Field Artillery and took the Officers Training' Course at Camp Taylor. Address, 249 Maple Avenue, Edgewood, Pa.

J. W. Gustaveson is with the Westinghouse Electric and Manufacturing Co., at East Pittsburg, Pa. He entered the fourth O. T. C. at Fortress Monroe and was commissioned, sailing for France with the 50th C. A. C. in October. Landed at Brest and attended the artillery school there. Later helped the engineers in the construction of the camp, sailing for home January 31. Address, 717 Wallace Avenue, Wilkinsburg, Pa.

O. G. Hugo is now with the Gulf Refining Co., at Port Arthur, Texas. Was a flying cadet at Rich Field, Waco, Texas.

W. E. Imhoff, 176th Aero Squadron, has returned to his home in Port Arthur, Texas, after a year's service overseas.

J. W. Stevens is now with Arthur D. Little, Inc. He served as a private in the C. W. S. in the research division.

Robert W. VanKirk, who was recently engaged in the development division of the C. W. S., stationed at Cleveland, Ohio, has been one of the chemical engineers chosen on the technical staff of Arthur D. Little, Inc.

N. T. Catlin has sailed for Shanghai to take up shipbuilding with the Standard Oil Co.

Lieut. Douglas Buchanan has returned to his home in North Adams after seeing service in France and Italy.

Mr. and Mrs. H. Leslie Platt of Brookline have announced the engagement of their daughter, Eleanor May, to Mr. Sidney Driggs Blaisdell of Providence, R. I. Mr. Blaisdell is now a lieutenant in the United States navy.

We hope that the men from whom we have not heard will write us a line telling us about themselves. Now that times are becoming more settled we should be able to keep track of one another, which task was almost impossible in the past year or so.

It is of interest to know that the final inspection of the Trans-Atlantic NC-4 Liberty motors, before they left the Packard plant, at Detroit, was made by Lieut. William H. Turner.

1919

E. R. Smoley, Secretary, Horse Head Inn, Palmerton, Pa.

We will all realize after reading this column and noting the numerous changes in address that our class is still unsettled and in a very restless state. Notwithstanding this fact quite a number of the boys have answered my recent appeal for news and have sent in some interesting matter.

Let's prove that the world's a small place after all, and even though we are way off in " God's Country " somewhere, jot down a few newsy lines and send them in. It is up to you all to co-operate to make this column what it should be.

The following are changes in address of members of our class:

Leon H. A. Weaver, 49 Montague Place, Montclair, N. J.—Edmund C. Adams, care Stone & Webster, 174 Milk Street, Boston, Mass.—F. Stanley Adams, Chicago Pneumatic Tool Company, Chicago, Ill.—Aubrey P. Ames, 19 Main Street, Amherst, Mass.—William H. Banks, Jr., 165 12th Street, Long Island City, N. Y.—Ray H. Bartlett, 523 Linden Street, Camden, N. J.—Leo E. Beaulieu, 221 47th Street, Newport News, Va.—Miss Ethel M. Benedict, 4142 Pimlico Road, Baltimore, Md.—William F. Bennett, New England Power Company, Shellbourne Falls, Mass.—Walter T. Beggar, care The United Fruit Company, Preston, Cuba.—Roderich M. Blood, 20 Orient Avenue, Newton Centre, Mass.—Capt. E. C. Bomer, 132 West Henry Street, Spartanburg, S. C.—L. J. Brown, 121 Dale Street, Roxbury, Mass.—Henry J. Bruno, 101 Coolidge Street, Brookline, Mass.—Capt. David P. Minard, Aberdeen, So. Dak.—Robert A. Montgomery, 421 Columbia Avenue, Palmerton, Pa.—J. H. Nelson, 53 Moraine Street, Jamaica Plain, Boston, Mass.—Charles J. Parsons, 116 Lyncroft Road, New Rochelle, N. Y.—Ellsworth G. D. Paterson, 976 Main Street, Melrose Highlands, Mass.—Carley H. Pauken, 228 Mt. Hope Place, New York, N. Y.—E. A. Richardson, 34 Gerard Avenue, Hartford, Conn.—Herbert W. Skogstad, 821 S. 3rd Street, LaCrosse, Wis.—Isidor Slotnik, 10 Lawrence Street, Chelsea, Mass.—Kenneth A. Wright, 54 Kenwood Street, Dorchester, Mass. —Lewis E. Hartman, 422 North Duke Street, Lancaster, Pa.—Edmund W. Hill, Harland Road, Norwich, Conn.—Ira P. Jones, 713 18th Avenue, South Nashville, Tenn.—Clyde C. Jones, Lawrence Club, Lawrence Park, Erie, Pa.—A. S. Kelsey, 24 James Avenue, Winthrop, Mass.—Harry A. Kuljian, 600 State Street, New Haven, Conn.—Wilfred O. Langville, 77 Warren Street, Newark, N. J.—G. C. Liu, 3611 Locust Street, Philadelphia, Pa.—Robert, B. MacMullin, 154 West 73d Street, New York, N. Y.—Capt. J. O. Merril, 707 Goodrich Avenue, St. Paul, Minn.—Gilbert F. Beers is at present working for the Newport News Shipbuilding Company, Newport News, Va.—James H. Becker is situated at 1079 Boylston Street, Boston, Mass.—Leonard M. Bruton, Rodgers Forge, York Road, Baltimore, Md.—J. M. Carter, Jr., 700 Hickory Street, Texarkana, Arkansas.—T. Dehon, Jr., Terry Shipbuilding Corporation, Port Wentworth, Savannah, Ga.—Capt. Ralph C. Flewelling, 399 Broadway, Cambridge, Mass.—Grant E. Gay, 162 Highland Street, Worcester, Mass.—Walter T. Hall, 735 Greenwood Avenue, Glencoe, Ill.—Perry B. Bryne, 1056 Commonwealth Avenue, Allston, Mass.—L. B. Cahill, 2326 Upland Place, Cincinnati, Ohio.—Oswald Cammunn, 532 Beacon Street, Boston, Mass.—Lester Van D. Chandler, Hotel DuPont, Jacksonville, Tenn.—Charles A. Chayne, 1758 Columbia Road, W. W., Washington, D. C.—William J. Hagan, Jr., Athens, Ore.—Lawrence Arnold Gillett, 203 Park Avenue, Princeton, W. Va.—E. A. Freeman, 541 Ward Street, Newton Centre, Mass.—Alexander M. McMorran, Oak Hill, New Brumswick, Canada.—George W. Cann, 66 Kenwood Drive, Lynn, Mass.—J. F. Lavagnino, 593 East California Street, Pasadena, Cal.

If any one wishes the address of a member of our class, write to the Alumni Association or to the secretary.

Irving Kennard was killed February 20, 1919, in a balloon accident at Arcadia, Cal.

From our worthy class president, Don Way:

> I saw the Review and your article with its appeal for news. Concerning myself there is none, as I have been plugging along with the Singer people. Thursday, however, my boss and I are going on a little trip to South Bend, Ind., to the woodworking factory out there.
>
> There are a number of the 1919 gang around New York. The evening of the Intercollegiate Swimming Meet up at C. C. N. Y. I ran into a couple of them, Bob Hackett, who is working for the Cooper Company in Newark, which concern makes artificial leather, and Bill Banks who is working in Astoria, L. I., for the New York and Queens Electric Light and Power Co. I have heard that Will Langille is in Newark with the Public Service Electric Co., but have not seen him. Larry Dalton I met at a studio party one night a while ago. He is connected with the engineering department of the New York Edison Co. According to Bob Hackett, Dennison is working for the American Can Co., between here and Bridgeport. He is an efficiency man. About six weeks ago I ran into Fred Barney at the Tech Club. He was an ensign then, doing salvage work on machine tools and power apparatus. He may have returned to the 'Stute by now.

From Antwerp, Belgium, in the American Consular Service "Chuck" Drew writes about his work:

> It is in the nature of trade extension, and my job is trying to get contact between Belgium and American merchants.

Chuck says he wants to keep in touch with the boys of '19. Write to him using the following address: C. W. Drew, American Vice Consul, Antwerp, Belgium.

Who should we hear from, but Bal, and he's in gay "Paree!"

> Have been in Paris for three days, and through the Tech Bureau have been getting reconnected with the outside world again. I saw your 1919 News Notes in the REVIEW, so I thought I would scratch you a note.
>
> I took my last exam at school September 13, was in the army September 16, and was in the St. Mihiel sector October 16. However, Boche air visitors were our greatest excitement before the armistice.
>
> I met Webb Shippey, '19, at Is-sin-Tille one day and we had a little reunion all of our own.

Bal's address is: Corp. M. C. Balfour, D. C. V.F., Tours, A. P. O. 717.

Aubrey P. Ames is located at 19 Main Street, Amherst, Mass.

The following was abstracted from a Washington, Pa., newspaper:

> George L. Baum has been with the American Field Service, ambulance department attached to the French army since his arrival in France in 1917. His chief companion, throughout the strenuous days in and about Verdun, Amiens, Cambrai, Noyon and other places made famous by the German offense last July and August was a Wolf-shepherd dog, known as Bergere loup d'Alsace, being a cross between an Alsatian Shepherd and a Belgian Wolf dog. Both have arrived recently to their home at 288 East Wheeling Street, Washington, Pa.

Let us hear from you, "Locke," particularly about some of the experiences you have had!

News has reached me that Capt. John W. Orcutt has returned from overseas and can be reached at his residence, 919 Blue Hill Avenue, Dorchester, Mass.

Radford W. Rigsby has returned from the great white way to his home at 44 Langdon Street, Cambridge, Mass., contrary to the line of our recent songs, "How are you going to keep them out of Broadway?" etc.

James Holt has changed his address to Box 295, South Swansea, Mass., R. F. D.

Charles W. Hyde may be reached, care C. A. Chandler, 497 Boylston Street, Brookline, Mass.—From Washington, D. C., care the United States Coast and Geodetic Survey, Freeman H. Horton has moved to 322 South 2d Street, Springfield, Ill.—Ellwood Harmon Aldrich is now located at 844 North Church Street, Rockport, Ill.

Chester Stewart writes from Wilmington, Del., 600 Rodney Street, some interesting news:

> Blake Darling was in town for three or four days and we had a good time. Blake is in the sales department for a fibre concern and is traveling around the East.
>
> Al Richards has been transferred to our Brooklyn Plant (National Aniline Co.) and will work on acid green.
>
> Bob Bolan is working on aniline and I'm working on cumidine, which is used for making a red foodstuffs' dye.
>
> Harry Peach is now with du Pont's and with him are O'Donnell, Welster, Sherman and Bond from our class.
>
> Say Gene, can you give me any dope on "Technique"? I have a couple of stubs which I'd like to redeem if they're putting out a book this year.

I imagine there are several others in our class who are also wondering whether we are going to obtain the copies of "Technique '20," which we signed up for. I have been fortunate to obtain a copy from a Tech man in town and have gone through it. The book is a very good one to possess for members of the class of 1920 as well as of our class. But let's get our books!

The following letter was received from Henry M. Blank, treasurer of Institute Committee:

At a recent meeting of the Institute Committee it was voted to give $100 to the class of 1919 toward a permanent fund. It has always been customary for a class on graduating to have such a fund of $200, hut the Institute Committee had only $194.83 on January 1, 1919. The Institute Committee also has paid $37.45 to the Alumni Association for your class.

Inasmuch as the money to the Institute Committee comes from the Student Tax, the $100 your class is receiving is really more than it has put into this tax.

From "The Tech" April 23:

The many friends of Lieut. Paul D. Peltier were much shocked to hear of his sudden death in a railroad accident at Eski-shehr, Asia Minor. Lieutenant Peltier came to the Institute in 1915, taking the biology course. While here he was in the Tech Show cast in 1915, 1916 and 1917, was a member of the Masque, and of the 1916-17 swimming team. When the United States entered the war he volunteered and became attached to the Sanitary Corps. He served in several places in this country and in February was selected as one of the bacteriologists to accompany the expedition for relief in the Near East which left New York on the "Leviathan," February 16.

A mysteriously signed letter arrived from the Essex Aniline Works giving the following addresses:

"Dutch" Seifert, V, analytical chemist, Leon Snow, X, and Dick Cashin, V, operating chemists for the above-mentioned firm.

George Fleming pleasantly surprised the boys in Palmerton, Pa., by a permanent visit. He has joined the group of Class '19 here, helping to produce zinc, zinc oxide and other zinc products, and is now located in the testing department of the New Jersey Zinc Company, in which department are also employed G. C. McCarten, E. J. Flynn and R. Burbank.

These '19 men deserve credit for their work in Palmerton, Pa., along sociological lines. They were instigators in the organization of a Palmerton Boys' Club, which club has mapped out a program of activities in town along athletic lines, such as tennis tournaments, baseball games, track meets, swimming meets, and later on basketball, football; along social lines, dances, etc.; and educational work, debating, dramatics, forestry, photography, etc. The sociological work here also includes work such as English instruction to foreigners, placing the children of town, chiefly of foreign parentage, in the atmosphere for proper development. For this purpose there is an institution called the Neighborhood House, similar to a Young Men's Christian Association, which has a splendid gymnasium and other facilities.

Recent '19 Class visitors in the Paris Bureau:

F. G. Elwell, R. W. Scott, L. H. A. Weaver, K. M. Cunningham, R. H. Gilbert, H. S. Derby, F. A. Bermingham, A. F. Kaupe, H. D. Corthell.

We note that Oswald Cammann is assistant treasurer of "The Tech." Steer them straight, "Ossy."

W. MacFarland of Wollaston, Mass., recently announced his engagement to Regina Pearl Saville of Hampton, Nova Scotia.

In the April 29 issue of the Pittsburgh "Press and Times" appeared the following news of S. K. Lau, VI:

Chinese student to play villain in Asiatic Drama of Home Life in Schenley Theatre of Pittsburgh. Mr. Lau is one of the principals in "Shao, Jeh, Yee," a Chinese play to be presented by the Chinese students' club of Pittsburgh at Schenley Theatre tomorrow night. The name of the play in English is "Faithfulness, Devotion, Sacrifice." It is a story of ideal Chinese family life and was written by five members of the club, dramatized by Owen White of the dramatic school of Carnegie Tech and coached by Theodore Viehman of the same school. Six principals enact the leading roles. Numerous specialties to be introduced during the performance, which is in English, include a game of shuttlecock, the Chinese national game, a number of lantern slides and a Chinese magician.

News has arrived of the death of Charles E. Westland, I, of 4 Aldrich Street, Somerville, Mass., on April 12, 1919. He was born May 11, 1898, prepared at Somerville High School and received his S.B. at Technology in September, 1918. While at school he was active in the Civil Engineering Society, and in Track.

H. L. Cassidy is at present a student in the University at Toulouse, and H. F. Marshall at Portiers.

ANSWER THE CALL FOR NEWS!

Vol. XXI NOVEMBER, 1919. No. 4

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHVSETTS INSTITVTE OF TECHNOLOGY

PVBLISHED BY
THE ALVMNI ASSOCIATION

[illegible]

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Cambridge, Mass.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY aims to give thorough instruction in *Civil, Mechanical, Chemical, Mining, Electrical and Sanitary Engineering; in Chemistry, Electrochemistry, Architecture, Physics, Biology and Public Health, Geology and Naval Architecture.*

To be admitted to the Institute, the applicant must have attained the age of seventeen years and must pass examinations in algebra, plane and solid geometry, physics, history of the United States (or ancient history), English, French and German. Preparation in some one of a series of elective subjects is also required. A division of these examinations between different examination periods is allowed. In general, a faithful student who has passed creditably through a good high school, having two years' study of French and German, should be able to pass the Institute examinations.

Graduates of colleges, and in general all applicants presenting certificates representing work done at other colleges, are excused from the usual entrance examinations and from any subjects already satisfactorily completed. Results of the College Entrance Examination Board, which holds examinations at many points throughout the country and in Europe, are also accepted for admission to the Institute.

Instruction is given by means of lectures and recitations, in connection with appropriate work in the laboratory, drawing-room or field. To this end extensive laboratories of chemistry, physics, biology, mining, mechanical engineering, applied mechanics, and the mechanic arts have been thoroughly equipped, and unusual opportunities for fieldwork and for the examination of existing structures and industries have been secured. So far as is practicable, instruction is given personally to small sections rather than by lectures to large bodies of students.

The regular courses are of four years' duration, and lead to the degree of Bachelor of Science. In most courses the work may also be distributed over five years by students who prefer to do so. Special students are admitted to work for which they are qualified; and the degrees of Master of Science, Doctor of Philosophy, and Doctor of Engineering are given for resident study subsequent to graduation. Opportunity for research is offered in all the departmental laboratories, in the three recently established Research Laboratories of Applied Chemistry and Physical Chemistry, and in the Sanitary Research Laboratory and Sewage Experiment Station.

The tuition fee, not including breakage in the laboratories, is $250 a year. In addition, $30 to $35 per year is required for books and drawing materials.

For catalogues and information, address

ALLYNE L. MERRILL, *Secretary of the Faculty,*

MASSACHUSETTS INSTITUTE OF TECHNOLOGY,

CAMBRIDGE, MASS.

ALUMNI ASSOCIATION

OF THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

OFFICERS

President, Coleman duPont, '84 (term expires May, 1920)

Vice-Presidents,
Van Rensselaer Lansingh, '98 (term expires May, 1920)
George L. Gilmore, '90 (term expires May, 1921)
Hollis Godfrey, '98 (President Technology Clubs Associated)

Secretary-Treasurer, Walter Humphreys, '97 (term expires May, 1920)

Executive Committee

The President, Vice-Presidents and Secretary-Treasurer
Orville B. Denison, '11 (term expires May, 1920)
Charles R. Main, '09 (term expires May, 1920)
Carl Gram, '09, (term expires May, 1921)
Kenneth Moller, '07 (term expires May, 1921)

TERM MEMBERS OF THE CORPORATION

Term expires June, 1920.
James W. Rollins, '78
Jasper Whiting, '89
William H. King, '94

Term expires June, 1921.
Samuel J. Mixter, '75
Henry J. Horn, '88
Harry J. Carlson, '92

Term expires June, 1922.
E. W. Rollins, '71
Willis R. Whitney, '90
Elisha Lee, '92

Term expires June, 1923
Eben S. Stevens, '68
Arthur D. Little, '85
Paul W. Litchfield, '96

Term expires June, 1924.
Henry A. Morss, '93
J. Franklin McElwain, '97
Merton L. Emerson, '04.

STANDING COMMITTEES

Assemblies

Lawrence Allen, '07, until 1920.
Harold E. Kebbon, '12, until 1921.
Ambrose Walker, '91, until 1922.
Orville B. Denison, '11, until 1923.
Capt. William R. Mattson, '13, until 1924.

Nominations

Term expires May, 1920	Term expires May, 1921	Term expires May, 1922
A. F. Bemis, '93.	Francis R. Hart, '89.	Frank L. Locke, '86.
George B. Glidden, '93.	Joseph H. Knight, '96.	Henry A. Morss, '93.
Merton L. Emerson, '04.	G. D'W. Marcy, '05.	Orville B. Denison, '11.

Permanent Funds

Francis R. Hart, '89, until May, 1920.
Frank A. Merrill, '87, until May, 1921.
Robert H. Richards, '68, until May, 1922.
Walter Humphreys, '97, *Treasurer.*

"The Technology Review"

Warren K. Lewis, '05, until 1920.
M. B. Dalton, '15, until 1921.
H. S. Wonson, '07, until 1922.
Wilfred Bancroft, '97, until 1923
Arthur T. Hopkins, '97, until 1924.

SPECIAL COMMITTEES

Alumni Fund

Everett Morss, '85, *Chairman*
James W. Rollins, '78.
Arthur T. Bradlee, '88.
Edwin S. Webster, '88.
Frederic H. Fay, '93.

Runkle Memorial

Robert H. Richards, '68.
C. Frank Allen, '72.
Harry W. Tyler, '84.

Revision of Constitution and By-Laws

James P. Munroe, '82, *Chairman.*
Everett Morss, '85.
Frederic H. Fay, '93.

Historical Collection

Paul C. Leonard, '17, until 1920.
T. D'A. Brophy, '16, until 1921.
S. K. Humphrey, '98, until 1922.
James P. Munroe, '82, until 1923, *Chairman.*
Dean Alfred E. Burton, until 1924.

ADVISORY COUNCILS FOR UNDERGRADUATE ACTIVITIES

Members of the advisory councils are elected at the April meeting of the Council.

Athletics

Allan W. Rowe, '01, until 1920.
(Eligible for re-election.)
H. E. Worcester, '97, until 1920.
Carl W. Gram, '09, until 1921.
Dr. J. Arnold Rockwell, '96, until 1922.
Frederick H. Hunter, '02, until 1922.

Budget and Finance Committees

H. E. Worcester, '97, until 1920.
Merton L. Emerson, '04, until 1921.
Bursar H. S. Ford, until 1922.

Undergraduate Publications

Grosvenor D'W. Marcy, '05, until 1920.
R. B. Pendergast, '02, until 1921.
A. T. Robinson, until 1922.
Paul C. Leonard, '17, until 1923.
Alden H. Waitt, '14, until 1924.

"*Tech Show*"

James I. Finnie, '09, until 1920.
George B. Glidden, '93, until 1921.
Alexander Macomber, '07, until 1922.

Musical Clubs

George E. Russell, '00, until 1920.
Allen Abrams, '15, until 1921.
Dudley Clapp, '10, until 1922.

THE M. I. T. COMMITTEE FOR NATIONAL SERVICE

James W. Rollins, '78, *Chairman.*

I. W. Litchfield, '85,
F. A. Smythe, '89,
Charles W. Eaton, '85,
Vice-Chairmen.

A. F. Bemis, '93.
M. L. Emerson, '04.
F. H. Fay, '93.
L. D. Gardner, '98.
Morris Knowles, '91.
R. B. Price, '94.
D. G. Robbins, '07.
H. W. Tyler, '84, *Secretary.*

Executive Committee

James W. Rollins, '78.
Harry W. Tyler, '84.
Charles W. Eaton, '85.

Finance Committee

H. W. Tyler, '84, *Chairman.*
A. F. Bemis, '93.
George L. Gilmore, '90.
Walter Humphreys, '97, *Treasurer.*

By vote of the Alumni Council, February 16, 1914, the president and secretary-treasurer are members *ex-officio* of all committees, without vote.

COUNCIL OF THE ALUMNI ASSOCIATION

Officers of the Association:

President, Coleman duPont, '84.
Vice-Presidents Van Rensselaer Lansingh, '98.
George L. Gilmore, '90.
President Tech Clubs Associated, Hollis Godfrey, '98.
Secretary-Treasurer, Walter Humphreys, '97.
Executive Committee Charles R. Main, '09.
Orville B. Denison, '11.
Kenneth Moller, '07.
Carl Gram, '09.

Five latest living ex-Presidents:

Jasper Whiting, '89.
Henry J. Horn, '88.
Charles A. Stone, '88.
Francis R. Hart, '89.
Henry A. Morss, '93.

Honorary member: I. W. Litchfield, '85.

Representatives at large:

Until the annual meeting, 1920.
Wilfred Bancroft, '97.
Frank Cheney, Jr., '82.
Raymond W. Ferris,'08.
Stanley G. H. Fitch, '00.
B. F. W. Russell, '98.

Until the annual meeting, 1921.
Charles W. Aiken, '91.
Bradley Dewey, '09.
George C. Gibbs, '00.
Russell Robb, '88.
James Swan, '91.

Class representatives:

'68, Robert H. Richards.
'69, Howard A. Carson.
'70, Charles R. Cross.
'71, E. W. Rollins.
'72, C. Frank Allen.
'73, Samuel E. Tinkham.
'74, George H. Barrus.
'75, Thomas Hibbard.
'76, C. T. Main.
'77, B. T. Williston.
'78, E. P. Collier.
'79, Charles S. Gooding.
'80, George H. Barton.
'81, John Duff.
'82, James P. Munroe.
'83, Horace B. Gale.
'84, Harry W. Tyler.
'85, Arthur D. Little.
'86, A. A. Noyes.
'87, Henry F. Bryant.
'88, John C. Runkle.
'89, Henry Howard.
'90, William Z. Ripley.
'91, Arthur H. Alley.
'92, Leonard Metcalf.
'93, George B. Glidden.
'94, S. C. Prescott.
'95, H. K. Barrows.
'96, J. Arnold Rockwell.
'97, C. W. Bradlee.
'98, Seth K. Humphrey.
'99, H. J. Skinner.
'00, Ingersoll Bowditch.
'01, Robert L. Williams.
'02, F. H. Hunter.
'03, T. E. Sears.
'04, M. L. Emerson.
'05, G. D'W. Marcy.
'06, Edward B. Rowe.
'07, Lawrence Allen.
'08, H. T. Gerrish.
'09, Carl W. Gram.
'10, Charles E. Green.
'11, Herbert Fryer.
'12, Harold E. Kebbon.
'13, W. R. Mattson.
'14, Charles Parker Fiske.
'15, Marshall B. Dalton.
'16, Russell H. White.
'17, Paul C. Leonard.
'18, Kenneth Reid.
'19, G. H. Wiswall, Jr.

Local Societies with representation on the Council:

Akron—Technology Club of Akron, Ohio,	W. K. Lewis, '05.
Albany—Technology Club of Eastern New York,	Myron M. Davis, '08.
Birmingham—Southeastern Technology Association,	H. S. Wonson, '07.
Buffalo—Technology Club of Buffalo,	Arthur C. Anthony, '86.
Butte—Technology Club of Montana,	George A. Packard, '90.
Charleston—Technology Club of West Virginia,	Arthur E. Fowle, '93.
Chicago—Technology Club of Chicago,	B. R. T. Collins, '88.
Cincinnati—Technology Club of Cincinnati,	H. N. Dawes, '93.
Cleveland—Technology Club of Northern Ohio,	C. W. Eaton, '85.
Connecticut Valley Technology Club,	Eben S. Stevens, '68.
Dayton Technology Association,	Charles F. Park, '92.
Denver—Rocky Mountain Technology Club,	Allen H. Rogers, '90.
Detroit Technology Association,	Everett Morss, '85.
Hartford—Technology Club of Hartford,	G. H. Gleason, '03.
Hawaii—Technology Club of Hawaii,	Edwin S. Webster, '88.
Japan—Technology Association of Japan,	H. W. Stevens, '04.
Kansas—Southwestern Association of M. I. T.,	W. L. Underwood, '98.
Lowell—Technology Club of Merrimack Valley,	R. A. Hale, '77.
Los Angeles—Technology Club of Southern California,	J. C. Chase, '74.
Manchester—Technology Club of New Hampshire,	Walter D. Davol, '06.
Milwaukee—Technology Club of Milwaukee,	
Minneapolis—Technology Club of Minnesota,	A. W. Rowe, '01.
Montreal—Technology Club of Lower Canada,	George W. Vaillant, '92.
New Bedford—Technology Club of New Bedford,	C. F. Lawton, '77.
New Haven County Technology Club,	Arthur T. Hopkins, '97.
New York—Technology Club of New York,	R. H. Howes, '03.
Philadelphia—Technology Club of Philadelphia,	Elisha Lee, '92.
Pittsfield—Berkshire County Alumni Association,	W. B. Snow, '82.
Portland—Technology Association of Oregon,	A. D. Maclachlan, '96.
Providence—Technology Club of Rhode Island,	Frank L. Pierce, '89.
St. Louis Society of the M. I. T.,	C. M. Spofford, '93.
Salt Lake City—Intermountain Technology Ass'n,	G. E. Russell, '00.
San Francisco—Technology Association of Northern California	Burton G. Philbrick, '02.
Seattle—Technology Club of Puget Sound,	A. G. Robbins, '86.
Spokane—Inland Empire Association of M. I. T.,	H. W. Gardner, '94.
Springfield—Technology Club of Springfield,	Frederick W. Fuller, '96.
Syracuse—M. I. T. Club of Central New York,	T. H. Skinner, '92.
Washington Society of the M. I. T.,	Henry A. Morss, '93.
Worcester—Technology Association of Worcester County,	Orville B. Denison, '11.

Other Local Societies not yet appointed a representative on the Council:

Atlanta Association M. I. T.
Boston—Technology Club of Boston.
Bridgeport—Technology Club of Bridgeport.
Chile—Technology Club of Chile.
China—Technology Club of China.
Duluth—Technology Club of Lake Superior.
Fall River—Technology Club of Fall River.
Harrisburg—Technology Club of Central Pennsylvania.
Indianapolis—Indiana Association M. I. T.
Louisville—Technology Club of Louisville, Ky.
New Orleans—Technology Club of the South.
Niagara Falls—Technology Club of Niagara Falls.
Panama—Technology Club of Panama.
Paris—Tech Bureau of the American University Union.
Peking—Technology Club of Peking.
Pittsburgh Association M. I. T.
Portland—Technology Club of Maine.
Rochester—Technology Club of Rochester.
Urbana—Tech Club of University of Illinois.

CLASS SECRETARIES

Robert Hallowell Richards . '68
32 Eliot Street, Jamaica Plain, Mass.

———— . . . . '69

Charles Robert Cross . . . '70
100 Upland Road, Brookline, Mass.

Edward Warren Rollins . . '71
Dover, N. H.

C. Frank Allen . . . . . . '72
88 Montview Street, West Roxbury, Mass.

Samuel Everett Tinkham . . '73
The Warren, Roxbury, Mass.

Charles French Read . . . '74
Old State House, Boston, Mass.

Edward A. W. Hammatt . . '75
South Orleans, Mass.

John Ripley Freeman . . . '76
815 Grosvenor Building, Providence, R. I.

Richard Augustus Hale . . '77
Essex Company, Lawrence, Mass.

E. P. Collier . . . . '78
256 Summer Street, Boston, Mass.

Frank G. Stantial . . . . '79
Care Cochrane Chemical Co., 148 State Street, Boston, Mass.

George Hunt Barton . . . '80
89 Trowbridge St., Cambridge, Mass.

Frank Elden Came . . . . '81
17 Metcalfe Apartments, Westmount, Montreal, P. Q.

Frank H. Briggs, Ass't Secretary, '81
Hotel Puritan, Boston, Mass.

Walter Bradlee Snow . . . '82
136 Federal Street, Boston, Mass.

Grenville T. Snelling, Ass't Sec. '82
114 East 28th Street, New York, N. Y.

Harvey Stuart Chase . . . '83
84 State Street, Boston, Mass.

Harry W. Tyler . . . . . . '84
M. I. T., Cambridge, Mass.

I. W. Litchfield . . . . . '85
28 Austin Street, Newtonville, Mass.

Arthur Graham Robbins . . '86
M. I. T., Cambridge, Mass.

Edward Galbraith Thomas . '87
213 Floyd Street, Toledo, Ohio.

William Gage Snow . . . . '88
95 Milk Street, Boston, Mass.

Walter H. Kilham . . . . '89
9 Park Street, Boston, Mass.

George L. Gilmore . . . . '90
Lexington, Mass.

Henry A. Fiske . . . . . . '91
Care General Fire Extinguisher Co., 275 West Exchange Street, Providence, R. I.

George H. Ingraham . . . '92
2052 Cornell Road, Cleveland, Ohio.

C. H. Chase, Ass't Secretary . . '92
Tufts College, Mass.

Frederic Harold Fay . . . '93
15 Beacon Street, Boston, Mass.

George B. Glidden, Ass't Sec. . '93
551 Tremont Street, Boston, Mass.

Samuel Cate Prescott . . . '94
M. I. T., Cambridge, Mass.

Wallace C. Brackett . . . '95
105 Washington Street, Boston, Mass.

Charles E. Locke . . . . . '96
M. I. T., Cambridge, Mass.

J. Arnold Rockwell, Ass't Sec. . '96
24 Garden Street, Cambridge, Mass.

John Arthur Collins, Jr. . . '97
67 Thorndyke Street, Lawrence, Mass.

Charles W. Bradlee, Act. Sec. . '97
54 Canal Street, Boston, Mass.

A. A. Blanchard . . . . . . '98
M. I. T., Cambridge, Mass.

W. Malcolm Corse . . . . . '99
The Ohio Brass Co., Mansfield, Ohio.

Benj. S. Hinckley, Ass't Sec. . '99
177 Park Street, Newton, Mass.

Ingersoll Bowditch . . . . '00
111 Devonshire Street, Boston, Mass.

Robert L. Williams . . . . '01
107 Waban Hill Road, North, Chestnut Hill, Mass.

Frederick Huston Hunter . . '02
Box 11, West Roxbury, Mass.

Burton G. Philbrick, Ass't Sec. '02
585 Boylston Street, Boston, Mass.

Myron H. Clark . . . . . . '03
1790 Broadway, New York, N. Y.

R. H. Nutter, Ass't Secretary . '03
Box 274, Lynn, Mass.

Henry W. Stevens . . . . . '04
12 Garrison Street, Chestnut Hill, Mass.

Amasa M. Holcombe, Ass't Sec. . '04
610 Boatmen's Bank Building, St. Louis, Mo.

Grosvenor DeWitt Marcy . . '05
246 Summer Street, Boston, Mass.
Charles W. Hawkes, Ass't Sec. '05
23 Saxon Road, Newton Highlands, Mass.
C. F. W. Wetterer . . . . . '06
147 Milk Street, Boston, Mass.
J. W. Kidder, Ass't Secretary . '06
50 Oliver Street, Boston, Mass.
Bryant Nichols . . . . . . '07
2 Rowe Street, Auburndale, Mass.
Harold S. Wonson, Ass't Sec. . '07
Care W. H. McElwain, Manchester, N. H.
Rudolph B. Weiler . . . . . '08
340 North Penn Street, W. Chester, Pa.
L. T. Collins, Ass't Secretary . '08
13 Congress Street, Boston, Mass.
Charles R. Main . . . . . . '09
201 Devonshire Street, Boston, Mass.
George A. Haynes, Ass't Sec. . '09
530 Atlantic Avenue, Boston, Mass.
Dudley Clapp . . . . '10
Care Gorton-Pew Fisheries, Gloucester, Mass.
Orville B. Denison . . . . . '11
63 Sidney Street, Cambridge A, Mass.
Herbert Fryer, Ass't Secretary . '11
162 Dartmouth Street, Boston, Mass.
Randall Cremer . . . . . . '12
7 The Circle, Rochelle Park, New Rochelle, N. Y.
F. D. Murdock . . . . . . '13
438 Huntington Avenue, Buffalo, N. Y.
Arthur W. Kenney, Ass't Sec. . '13
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12 George Street, Medford, Mass.
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THE TECHNOLOGY CLUBS ASSOCIATED

Organized in New York, January 17, 1913.

President, Hollis Godfrey, '98, Philadelphia, Pa.

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Assistant Secretary, Eugene S. Foljambe, '01, Philadelphia, Pa.

LOCAL ALUMNI ASSOCIATIONS

Akron—The M. I. T. Club of Akron, Ohio, W. H. Fleming ('16), Secretary 350 Wildwood Avenue, Akron, Ohio.

☞ Luncheon— First Saturday of the month at the University Club, Akron, Ohio.

Albany—Technology Club of Eastern New York, Norman A. Lougee ('11), Secretary, General Electric Co., Consulting Engineers' Laboratory, Schenectady, N. Y.

Atlanta— Atlanta Association M. I. T., W. J. Sayward ('01), Secretary, 609 Chamber of Commerce, Atlanta, Ga.

☞ Luncheon—Fridays at 1 o'clock at Chamber of Commerce Cafe.

Birmingham—Southeastern Technology Association, F. C. Weiss ('13), Secretary, Alabama Power Co., Birmingham, Ala.

☞ Luncheon—First Wednesday of each month at 1 o'clock at the Hillman.

Boston—Technology Club of Boston, Dr. Robert Seaton Williams ('02). Secretary, M. I. T., Cambridge, Mass.

Bridgeport—Technology Club of Bridgeport, Howard L. Stone ('14), Secretary, 2814 Main Street, Stratford, Conn.

Buffalo—Technology Club of Buffalo, E. Earle Root ('10), Secretary, Buffalo Standard Ink Corp. Buffalo, N. Y.

☞ Luncheon—First Thursday of month, 12.30 p.m. at Buffalo Chamber of Commerce.

Butte—Technology Association of Montana, C. D. Demond ('93), Secretary-Treasurer, 704 Main Street, Anaconda, Mont.

Charleston, W. Va.—Technology Club of West Virginia, James B. Pierce, Jr. ('11), Secretary-Treasurer, P. O. Box 932, Charleston, W. Va.

☞ Luncheon—Third Saturday in each month at 7.30 p.m., at Edgewood Country Club, Charleston, W. Va.

Chicago—Technology Club of Chicago, Henry A. Pemberton ('03), Secretary-Treasurer, 732 Monadnock Building, Chicago, Ill.

☞ Luncheon—Tuesdays at 12.30 p.m. at Engineers Club, 314 Federal Street, Chicago, Ill.

Chile—Technology Club of Chile, William W. Stevens ('98), Secretary, 17 Gramercy Place, New York, N. Y.

China—Technology Club of China, William A. Adams ('08), Secretary-Treasurer, 39 Nanking Road, Shanghai, China.

☞ Luncheon—First Saturday of the month, at 12.30, at the Carlton.

Cincinnati—The Cincinnati M. I. T. Club, John M. Hargrave ('12), Secretary, Cincinnati Tool Co., Cincinnati, Ohio.

☞ Luncheon—Tuesdays from 12.00 to 2.00 p.m. at the Schuler Café, 626 Vine Street (2d floor).

Cleveland—Technology Club of Northern Ohio, Berger V. Zamore ('16), Secretary, 702-5-1900 Euclid Bldg., Cleveland, Ohio.

Connecticut Valley Technology Association, Ernest W. Pelton ('03), Secretary, 77 Forest Street, New Britain, Conn.

Dayton—Dayton Technology Association, W. H. Kiefaber ('08), Secretary-Treasurer, 601 East Monument Avenue, Dayton, Ohio.

☞ Luncheon—Tuesdays at 12.15 at the Dayton Engineers Club.

Denver—Rocky Mountain Technology Club, Glenn D. Jones ('13), Secretary, 1910 E. 22d Avenue, Denver, Col.

☞ Luncheon—Wednesdays from 12.30 to 1.30 p.m. at Colorado Electric Club, Chamber of Commerce Building, Denver, Col.

Detroit—Detroit Technology Association, Joseph N. French ('11), Secretary-Treasurer, 2098 Woodward Avenue, Detroit, Mich.

☞ Luncheon—First Wednesday of each month at 12.30 at the Detroit Board of Commerce.

Duluth—Technology Club of Lake Superior, Duluth, Minn.

Fall River—Technology Club of Fall River, Arthur E. Hirst ('13), Secretary, 55 Madison Street, Fall River, Mass.

Harrisburg—Technology Club of Central Pennsylvania, Farley Gannett ('02), Secretary, Telegraph Building, Harrisburg, Pa.

Hartford—Technology Club of Hartford, G. W. Baker ('92), Secretary, Box 983, Hartford, Conn.

☞ Luncheon—Second and fourth Thursday of each month at the City Club.

Hawaii—Technology Club of Hawaii, Norman Watkins ('98), Secretary, Box 385, Honolulu, T. H.

Indianapolis—Indiana Association M. I. T., Frank B. Shields ('07), Secretary, Fletcher Trust Building, Indianapolis, Ind.

☞ Dinner—Second Monday of each month at 6.30 p.m. at the University Club.

Japan—Technology Association of Japan, Takuma Dan ('78), Secretary-Treasurer, 344 Awoyama Harajiku, Tokio, Japan.

Kansas City, Mo.—Southwestern Association M. I. T., Hermann Henrici ('06), Secretary-Treasurer, 222 Commerce Street, Kansas City, Mo.

Lawrence
Lowell
} Technology Club of the Merrimack Valley, John Arthur Collins, Jr. ('97), Secretary, 67 Thorndyke Street, Lawrence, Mass.

Los Angeles—Technology Club of Southern California, Paul E. Jeffers ('12), Secretary, 206 S. Gramercy Place, Los Angeles, Cal.

☞ Luncheon—First Wednesday of each month at the University Club.

Louisville—Technology Club of Louisville, L. S. Streng ('98), Secretary, Louisville Gas & Electric Co., 311 West Chestnut Street, Louisville, Ky.

Manchester—Technology Club of New Hampshire, Walter D. Davol ('06), Secretary-Treasurer, 819 Elm Street, Manchester, N. H.

Milwaukee—Technology Club of Milwaukee, Louis O. French, Secretary, 221 Grand Avenue, Milwaukee, Wis.

☞ Luncheon—Every Thursday noon at the University Club.

Minneapolis—Technology Association of Minnesota, Harold E. Young ('06), Secretary, 15 South 5th Street, Minneapolis, Minn.

Montreal—Technology Club of Lower Canada, E. B. Evans ('06), Secretary, 357 St. Catherine Street, W., Montreal, Canada.

New Bedford—Technology Club of New Bedford, Richard D. Chase ('92), Secretary-Treasurer, 607 Purchase Street, New Bedford, Mass. Secretary *pro tem*, Charles F. Wing, Jr. ('98), 36 Purchase Street, New Bedford, Mass.

New Haven—New Haven County Technology Club, Roy L. Parsell ('14), care Winchester Repeating Arms Co., New Haven, Conn.

New Orleans—Technology Club of the South, J. H. O'Neil ('10), Sanitary Engineer, Rapides Parish, Alexandria, La.

New York—Technology Club of New York, Frederick Mathesius, Jr., ('02), Secretary, 17 Gramercy Park, New York, N. Y.

Niagara Falls—Niagara Falls Technology Club, Norman Duffett ('11), care Union Carbide Co., Niagara Falls, N. Y.

Panama—Technology Club of Panama, W. F. Grimes, Jr. ('08), Balboa Heights, Canal Zone.

Paris—Technology Club of Paris, Edward Stuart ('10), 12 Rue Boissy d'Anglas, Paris.

Peking—Technology Club of Peking, Ziang Yien Chow ('15), Bureau of Municipal Administration, Department of Surveying, Peking, China.

Philadelphia—Technology Club of Philadelphia, Headquarters, Engineers Club, 1317 Spruce Street, M. B. Dalton ('15), Secretary-Treasurer, Liberty Mutual Insurance Co., 608 Chestnut Street, Philadelphia, Pa.

Pittsburgh—Pittsburgh Association M. I. T., Francis Foote ('16), Secretary, Jones Building, Pittsburgh, Pa.

Pittsfield—Berkshire County Alumni Association of M. I. T.

Portland, Maine—Technology Association of Maine, Joseph A. Warren ('91), Secretary, Cumberland Mills, Maine.

Portland, Oregon—Technology Association of Oregon, C. A. Merriam ('06), Secretary-Treasurer, 20 Seattle National Bank Building, Seattle, Wash.
☞ Luncheon—Every noon at the Hazelwood Lunch, Portland, Ore.

Providence—Technology Club of Rhode Island, Clarence L. Hussey ('08), Secretary-Treasurer, 100 High Service Avenue, Providence, R. I.

Rochester—Technology Club of Rochester, Virgil M. Palmer ('03), Secretary, Kodak Park Works, Eastman Kodak Co., Rochester, N. Y.

St. Louis—St. Louis Society of the M. I. T., Amasa M. Holcombe ('04), Secretary-Treasurer, 3305 18th Street., N. W., Washington, D. C.

Salt Lake City—Intermountain Technology Association, Walter H. Trask, Jr. ('06), Secretary-Treasurer, University Club, Salt Lake City, Utah.

San Francisco—Technology Association of Northern California, Headquarters, Room 1107, 833 Market Street, San Francisco, Cal., John R. Brownell ('01), Secretary *pro tem*, 210 Crocker Building, San Francisco, Cal.
☞ Luncheon—No regular date, but quickly arranged on occasion.

Seattle—Technology Club of Puget Sound, H. H. Whithed ('11), Secretary-Treasurer, care P. S. T. L. & P. Co., Seattle, Wash.
☞ Luncheon—Third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle, Wash.

Spokane—Inland Empire Association of the M. I. T.

Springfield—Technology Club of Springfield, R. C. Albro ('07), Secretary-Treasurer, 499 Main Street, care Fred T. Ley & Co., Inc., Springfield, Mass.

Syracuse—M. I. T. Club of Central New York, J. S. Barnes ('08), Secretary, 204 Harvard Place, Syracuse, N. Y.

Urbana—Tech Club of the University of Illinois, Arthur C. Willard ('04), Secretary, University of Illinois, Urbana, Ill.

Washington—Washington Society of the M. I. T., E. J. Casselman ('15), Secretary, 3519 Lowell Street, N. W., Washington, D. C.

Worcester—Technology Association of Worcester County, Louis E. Vaughan, ('02), Secretary-Treasurer, 4 Fenimore Road, Worcester, Mass.

SUSTAINING MEMBERS OF THE ALUMNI ASSOCIATION

Louis W. Adams, '03
*Charles M. Baker, '78
James C. T. Baldwin, '88
Spaulding Bartlett, '90
William G. Bixby, '89
Zenas W. Bliss, '89
Philip D. Borden, '73
James C. Boyd, '93
Henry G. Bradlee, '91
Frank A. Browne, '06
George O. Carpenter, '73
*George E. Claflin, '88
E. Pomeroy Collier, '78
Arthur E. G. Collins, '92
Joseph W. Crowell, '04
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George A. Draper, '76
Nathan Durfee, '89
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George E. Hale, '90
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Henry J. Horn, '88
Seth K. Humphrey, '98
Edward L. Hurd, '95
Clarence M. Joyce, '03
Charles W. Kellogg, Jr., '02
William J. Knapp, '06
Eugene H. Laws, '96
Richard W. Lodge, '79
George Holt Lukes, '92

Sampson D. Mason, '70
Miss Susan Minns, '81
James P. Munroe, '82
Atwood C. Page, '10
William B. Page, '93
William I. Palmer, '91
William H. Pratt, '94
Raymond B. Price, '94
Charles W. Ricker, '91
C. Snelling Robinson, '84
Dwight P. Robinson, '92
Allen H. Rogers, '90
J. W. Rollins, '78
Henry F. Ross, '82
James B. Russell, '70
William O. Sawtelle, '99
Alfred H. Sawyer, '88
Richard E. Schmidt, '87
George O. Schneller, '00
Lewis J. Seidensticker, '98
Henry D. Shute, '92
Joseph C. Smith, '88
Frank A. Smythe, '89
George F. Starbuck, '97
William C. Stearns, '71
Gerard Swope, '95
Henry P. Talbot, '85
Henry H. Tozier, '96
Leonard Tufts, '94
Etheredge Walker, '99
Joseph E. Walworth, '95
Leonard C. Wason, '91
Willard H. Watkins, '95
Belvin T. Williston, '77
Frederick W. Wood, '77
Henry E. Worcester, '97
George M. Yorke, '93
Albert G. Zimmerman, '94.

November 1, 1919

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* Deceased.

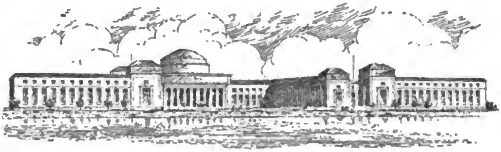
WATCH
THIS
SPACE

PORTRAIT OF MR. SMITH
TECHNOLOGY'S BENEFACTOR

DR. RICHARD C. MACLAURIN

From a recent photograph in his office

PROFESSOR CHARLES FRANCIS ADAMS CURRIER
1862-1919
Head of the Department of History



The Technology Review

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Robert E. Rogers, *Editor*, Massachusetts Institute of Technology, Cambridge, Mass.

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TO THE ALUMNI OF TECHNOLOGY

YOU will agree with me that the hope of America lies primarily in maintaining the highest form of education to be found anywhere in the world. War has ended one era, and has opened up a new one, and in this new era as individuals and as a nation we are called upon to play a great part. Knowing that we can do nothing too good for the training of the young men and women who must bear the heat and burden of the coming day, Technology will never be content with anything but the very best in the field that she has made her own. As in the dark days of old she rallied to her cause innumerable friends, so in the present days of her power and prosperity she can do nothing less than go forward from strength to strength.

Richard Cockburn Maclaurin.

FROM THE PRESIDENT OF THE ALUMNI ASSOCIATION

Coleman duPont, '84, to Technology men

IT is an interesting coincidence that at the close of this great war, Technology should again come before the nation, asking for approbation and backing. The Institute was founded at the end of the Civil War, when the advocates of technical education laid their plans before the Legislature of Massachusetts and asked for their approval and backing. Their success is known to every Tech man, and now we are encouraged to appeal, not only to the people of Massachusetts, but to the whole United States for the means of developing a greater Technology. Our national strength lies in our industries and our industries draw to a large extent upon the technical schools for their leaders.

We have solid foundations upon which to build this greater Technology. Our new plant, which has an outside capacity of two thousand five hundred men, can with relatively little alteration be accommodated to the needs of three thousand or thirty-five hundred men. The great need is money. 'MR. SMITH,' THE UNKNOWN BENEFACTOR OF TECHNOLOGY, HAS SET THE GOAL AT EIGHT MILLIONS ENDOWMENT AND HAS FURNISHED A POWERFUL INCENTIVE TO OUR EFFORTS BY PROMISING HALF OF THAT SUM IF WE, THE GRADUATES AND FRIENDS OF TECHNOLOGY, WILL RAISE THE OTHER HALF.

There is, I am sure, no necessity for me to go into the reasons for the raising of this fund—Harvard and Princeton have already launched their campaigns for large endowments to meet the rising cost of living and colleges and universities all over the country are preparing to follow suit. The arrears of the last two years of war, when the colleges were kept open for the benefit of relatively few students, must be made up, and provision made for the enormously increased enrollments of this and next year, when all of our young men are released from wartime service and can turn to the business of education once more.

Technology must be ready to serve these young men who have already proven themselves worthy of the best she can offer; she must be ready to give a fuller measure of service to the country by turning out more men of power and enthusiasm than ever before in her history. The whole world of commerce is looking to America for opportunity and for leadership and America is looking to the men of science, the men of practical scientific training for guidance. Technology has proven herself able to develop such men and if she is given a free hand and a full opportunity, will make herself a bulwark of strength to the nation.

COLMAN DUPONT, '84.

THE FACTS FROM DR. MACLAURIN

It is a condition and not a theory that confronts us

Technology cannot conduct a campaign for its endowment like Harvard, because she has not the wealthy alumni behind her. When I saw the list of names on the Harvard committee I could not help smiling. I think I could raise the $10,000,000 from that committee alone. Multi-millionaires compose it, largely.

In order to raise the required sum Technology must depend upon the industrial leaders, men who are able to contribute $500,000 or $250,000 or $100,000. We cannot expect it from the alumni.

Some of them are very wealthy and some of them are generous, but the average man of wealth is like the average man of slender means, some are generous and liberal, and some are just the opposite. So we are forced to the great industrial leaders, to the men whose fortunes were in part secured through the aid rendered them by men trained in the industries at Technology.

Increased production is the great aim of industrial training. It means efficiency, a greater output for the same or less expense. That is what Technology has to offer for the support which she asks.

Why does the institution need this? This is one reason: It costs over $1,000,000 a year just for current expenses. Here is another: It requires eleven thousand tons of coal a year to heat the buildings and to supply the power needed for the machinery and laboratories used. The coal bill alone was over $120,000 last year. There are only three ways in which the Institute can secure funds. First, from the students in tuition; second, from the State in appropriations; and third, from the public. It is impossible to get any more revenue out of the students, because they are paying more for their education today, than at any other time in the history of the Institute.

The Institute had two thousand students last year. If the running expenses alone were assessed upon the students, it would cost each student $550 for the year. It would be impossible to collect that amount from the great majority of the students.

That brings me to a point that is not generally understood by the average citizen and that point is this: That every student we have at the university represents a loss. It costs more to teach him than he is to pay. The loss is made up through the endowment. We had two thousand students last year, we will try to accommodate three thousand students this coming year. Every additional student, far from meaning an increased income, to the institution, means an increased loss. This is true of all educational institutions, but more especially true of Technology.

The reason for it is this: At Technology the student is taught by giving him an opportunity to do things. This means a large and costly equipment. When we moved all the equipment we had in the old building to the new, we had to purchase an additional $1,000,000 worth of new equipment. All this costly equipment in the shape of machinery is not needed in the usual college.

Further, in the average college, it is possible for one instructor to teach large classes, but in Technology, where each student is given individual attention, the classes must be small. The technical character of the instruction given makes it necessary for us to have one instructor for every six students, consequently it is clear that an institution like Technology requires more money to operate it than the ordinary college.

We need the increased endowment not only to meet the increased cost of operation, but to expand it. When we moved into our new buildings, many thought we had extended our work too greatly. Experience has shown that the twenty acres of floor space which we now occupy is not sufficient to meet the demands for any large increase in numbers. Circumstances and the good of the community require us to expand our work and to widen the scope of our influence. We plan to do this gradually.

We could accommodate from three thousand to four thousand students this year if we had the facilities. We will be obliged to serve that number of students in two or three more years. We are planning to add to our plant to accommodate gradually more and more students.

The Institute has virtually become a national institution. The great states of the west have their state universities where instruction is practically free, and yet such is the quality of instruction at Technology that students from California and the far western states are coming in increasing numbers to the banks of the Charles for instruction. Growth means added expense for each student entered; that is why the Institute needs an increased endowment.

It needs an increased endowment also, because the industries have virtually raided our staff of instructors and we need more money to keep our professors and engineers with us. As a rule men follow the academic life because they like it, because it fits in well with their scheme of life. We had an engineer on the staff of instructors who refused an offer of $50,000 from an outside concern. We are able to pay him only $5000 a year. He is allowed to increase his income by consulting work outside the classroom. He is able to earn as much in consulting work as he does in the classroom and he says he is going to stay with the Institute because he can get along sufficiently well on $10,000 a year and enjoy academic life, which he appreciates.

The great industries are keen for technically trained men because they know that competition is so great that improved methods mean the difference between success and failure in many instances. No institution of learning can hope to pay its staff of instructors the salary they could command in industry, but we must make some approaches to the wage that industrial service pays young progressive men. A man cannot marry and keep a family on $2000 a year now in our large cities. Part of the endowment will go in paying increased salaries to instructors.

For two more years the Institute will enjoy an annual appropriation of $1,000,000, a year from the state, but owing to the recent change in the constitution prohibiting grants of public money to institutions, not controlled entirely by the state, the institute will lose this grant in two years.

At present the state maintains eighty free scholarships in the institution. It is possible that these scholarships may be retained. Of course they may not but there is nothing to prevent the state from continuing to send eighty poor boys to the Institute as it has done in the past. The scholarships are grants of money to individuals and not to institutions, so that there is nothing to prevent boys of ability and industry who live in Massachusetts, from benefiting through the generosity of the state. But as I have said before, each new student means an increased loss to the university.

Unless that deficit is met by the endowment, we cannot hope to receive any more aid from the state. That brings us down to the only source of revenue left, and that is the great industrial leaders. The men that Technology turns out every year work largely to increase the fortune of others. They are engineers; they plan the great industrial establishments, build bridges and railroads and make the changes that mean progress and improvement in business, but their efforts go largely to increase the fortune of the capitalist and the leader of industry, the banker and the investor. That is why the Institute is looking to the industries for support in realizing the endowment.

No man, not the average man who leaves Technology, is able to make a fortune large enough to enable him to give away $100,000 or more before he is fifty years old. We have only five hundred alumni who have passed fifty years. Harvard, I dare say, has at least two thousand. Furthermore, Technology has not been in existence long enough to build up a great body of alumni of wealth and position. There are only ten thousand Technology alumni and most of them are young men struggling along.

The great expansion in the Institute is only recent. We did not have the room for the large classes, so that, although we are fifty years old, the classes in the past, have been all small compared to other great colleges. The result has been a small and youthful body of alumni who are unable to bear alone the burden of raising an endowment of $10,000,000.

Mr. Smith has generously come to the assistance of the university again. He has already given about $7,000,000 and has promised $4,000,000, provided the Institute gets an equal sum. Of this amount, $3,000,000 must be raised by the first of January, 1920, the remaining $1,000,000 can be secured within any reasonable time, but the alumni are hoping to exceed the $3,000,000 required.

Richard C. Maclaurin.

TESTIMONY

Mr. Thompson, of London, prominently identified with large interests in Europe and America:

" A striking instance of the esteem in which the Massachusetts Institute of Technology is held by men of independent judgment abroad is that of my friend, Mr. Archibald Denny, one of the famous engineering and ship-building family, of Dumbarton, Scotland, who sent his son to be educated at the 'Boston Tech.' As Mr. Denny said to me, it was a remarkable circumstance that he should have considered it wise to send his son from one of the most active engineering and ship-building centers, Glasgow, to Boston, where the activity in that line is in no way comparable, in order to give him the most thorough training possible. Since his son's return to Dumbarton, and entry into the firm's service, Mr. Denny has confirmed to me his complete satisfaction with the result obtained."

PROGRESS REPORT ON EDUCATIONAL FUND CAMPAIGN

From August 25 to October 20 — A story of organization

THE campaign which is to add eight million dollars to Technology's permanent endowment was launched in New York City on August 26 last. On that day Coleman du Pont, '84, president of the Alumni Association, announced that a committee had been appointed to work with Dr. Maclaurin in raising the fund.

This first committee, besides General du Pont, consisted of Theodore N. Vail, Charles A. Stone, '88, Everett Morss, '85, Otto H. Kahn, General Edmund Hayes, United States Army, and Charles Hayden, '90, all of whom are either alumni or members of the corporation.

The campaign was started with a boom that has since become familiar to all, the conditional gift, by Technology's former friend and donor, the mysterious "Mr. Smith," of four million dollars, on condition that the Institute raise an equal amount, of which three million shall be secured by January 1, 1920.

Of that four million, one million and a half has been pledged.

"Mr. Smith," it is reported, has since made another offer, more in jest apparently than anything, from which it must seem that he is enjoying highly the nationwide speculation about his identity. He offers to tell his name if any single individual will put up the equivalent of all his gifts to Technology, in the neighborhood of seven million dollars, and in that case, he will add another three million himself.

But this offer seems outside the range of practical politics at present.

Not so the concrete offer of four millions—and it is to secure this by doubling it, that the present campaign was undertaken.

The drive was first directed from the New York office, but as the Institute opening drew near, it was deemed wisest to concentrate the direction at Technology itself. It was determined that the campaign must be one of the personal approach, in view of the large amounts of money being asked for other educational institutions at the same time, and that every class and local association in existence must be organized to get in touch with its men.

For this purpose, Arthur H. Stubbs, '14, formerly of the First National Bank of Boston, was appointed Dr. Maclaurin's executive secretary during the campaign. Following this a special publicity organization was arranged for under Harold E. Lobdell, '17, formerly general manager of The Tech who only recently resigned his commission in the army to take up business life.

The most important office, that of director of the campaign was intrusted to Merton L. Emerson, '04, Course I, at present general manager of the Housing Company of Boston, vice president of the American Pneumatic Service Company, and the youngest man ever elected to the Corporation of Technology.

Mr. Emerson's job was to stay in Boston, while Dr. Maclaurin, Mr. Stubbs, and Professor William H. Walker, head of the department of Chemical Engineering, and formerly chief of the gas offense division of the Chemical Warfare Service, travelled to cover the principal cities of the country. Professor Walker has already covered St. Louis and Kansas City, and reports that "everything in the middle west is booming, particularly the building trades. The architects are busy. Big manufacturing plants are being erected, as manufacturing conditions are better there and the reliable labor supply seems to be drawing these concerns from the east. The prospects therefore look good."

At the first meeting of the Alumni Council, of which a full report is given on another page, the situation was presented to the organization, and steps were taken to organize, particularly for Massachusetts and New England, from which has come the greater part of our student body. The alumni committee consists of Frederick K. Copeland, '76, I. W. Litchfield, '85, Edwin S. Webster, '88, William S. King, '94, Merton L. Emerson, '04, Bradley Dewey, '09, Arthur R. Stubbs, '14, and Professor W. H. Walker.

This committee has control of other smaller committees, one for each important kind of organization: the local associations, the class secretaries, the fraternities, the undergraduates, the war classes, the faculty, so that every man may be approached from as many different angles as possible, not with the idea of inefficient duplication but to appeal to each man from as many angles of his interest and associations as possible. There will be committees for large industries employing Tech men, and for possible givers not connected with the Institute. There are also committees arranged by industry: the leather committee, the textiles, wool and cotton, paper, and the like. An organization chart of the plan of campaign is printed herewith.

Meanwhile all the important Technology centers this side of the Rockies have been seen and the local alumni organized to deal with their cities or communities. The most important local club is, by reason of numbers and position, the Technology Club of New York, and following Dr. Maclaurin's presentation of the case to them, the club organized a central committee to take care of New York. Its chairman is William H. King, '94, assistant corporation counsel of New York City and member of the Institute Corporation, and the other members were Ira Abbot, '81, founder of the New York Tech Club, Edward H. Huxley, '95, president of the United States Rubber Export Co., Robert S. Allyn, '98, patent lawyer; Lester D. Gardner, '98, editor of "Aviation" and president of the New York Club; Frank C. Schmidt, '95, general manager of the Standard Wood Treating Co.; T. C. Desmond, '09, president of the Newburgh Shipyards Corporation; and Edward P. Brooks, '17, assistant to the general manager of the John Curtis Corporation.

At a subsequent meeting of the corporation, Mr. King told the members that "the alumni in the vicinity of New York are back of this drive to the limit. One hundred committeemen will personally solicit the fifteen hundred alumni."

In the middle of September, Mr. Stubbs made a visit to a number of cities in the middle west where Tech men are numerous, including all the important industrial centers, to prepare the way for Dr. Maclaurin's later trip.

At the Council meeting on his return, Stubbs told of how he was everywhere received with enthusiasm engendered by the idea, that everywhere organization was started and men pledged themselves to see to it personally that every possible Tech graduate available would be approached and persuaded to give or work, or both.

On October 13, Dr. Maclaurin and General du Pont left New York on a two weeks trip through the middle west. It was a long and hard trip, covering a great deal of ground and meeting a great number of men in a very short time, but it was deemed necessary in order to bring home to the groups of Tech men out of touch with the east the necessity for prompt and efficient action in the two months remaining, if the four millions were to be raised by January first.

The itinerary was as follows: New York City, Cleveland, Akron, Chicago, Milwaukee, Minneapolis, Kansas City, St. Louis, Indianapolis, Cincinnati, Detroit, Buffalo and New York again on October 27.

By the end of October the most important work in New England was the thorough organization of the class secretaries. Dinners were on each Thursday, October 16, 23 and 30, at the Engineers Club and the Walker Memorial, first to the class secretaries and later to the full committee from each class. At the meeting of October 23, each class was pledged to organize within the week, and the first edition of the Red Book of information and selling arguments was issued. The men were sent away with a stirring benediction by Everett Morss.

The benediction must have worked because at the next meeting, October 30, a large one in the Memorial, there were only a very few classes, mostly in the 70's and early 80's, that had not organized and could report a small pledge, obtained before work was really started.

The amount of ordinary pledges chalked up that night was about $50,000, not including the class of 1885 which announced a subscription of $255,300 from a few men. The leading class among the younger classes, the poorer men, was Denison's, 1911, which led with $2,578, and which also, one week before was the first class to organize thoroughly, plan its campaign and get out its first selling letter.

All this was considered a good start by the committee, with over $300,000 pledged from the classes alone before the campaign was more than a skeleton organization.

So things stand as we go to press on November 1. The January number of the Review should be a full record of triumphant accomplishment. This can be only the story of careful, efficient and enthusiastic organization and preparation. The alumni have been listed, card catalogued, indexed. The local centers and class secretaries are being supplied with information and ammunition. The fight is on.

Remember the slogans.

To sell Technology to American industry. This is a sales campaign, not a begging campaign. Organize it!

Give and get! Give every penny you can give, but get others to give too.

Remember you paid for only a part of your education. The Institute paid the rest. Pay up your back debts.

And, finally, THE KEYNOTE of the campaign by Director Emerson.

GET THE LARGEST POSSIBLE PERCENTAGE OF THE ALUMNI AND FORMER STUDENTS TO CONTRIBUTE SOMETHING. A HIGH PERCENTAGE, WHEN THE YOUTH OF OUR MEN IS TAKEN INTO CONSIDERATION, WILL AFFORD CONVINCING ARGUMENT TO MANY SUBSTANTIAL BUSINESS MEN OF NO COLLEGE AFFILIATION WHO ARE WILLING TO AID US IF THE BACKBONE OF TECHNOLOGY, ITS ALUMNI, HAS DONE ITS SHARE.

PERSONAL CONTACT IS THE ONLY MEANS OF GETTING THIS HIGH PERCENTAGE.

GET TO WORK AT ONCE

Technology never fails, but as Dr. Maclaurin well says, the message that must be brought home is this: "The destinies of Technology are in the hands of its alumni. Once more their loyalty must be expressed in action. Failure would be a disaster of the first magnitude. No mere perfunctory will suffice. Tech men must work like beavers, and they must give and get till it hurts. Never before has their devotion to their Alma Mater been put to such a test."

THE PRESIDENT'S TWELVE POINTS

Dr. Maclaurin's reasons why the drive must win

1. The anonymous gift of four million dollars to the Massachusetts Institute of Technology from a great industrial leader who is neither a Technology man nor a Massachusetts man, should focus attention on that institution and on its opportunities for service to industry.

2. Just after the Civil War, Technology was founded by far-sighted citizens of Massachusetts who saw the need of technical training of the highest type if industry was to overcome the difficulties following the great war.

3. The half century that has elapsed has served to emphasize the need, and has demonstrated the efficiency of the Massachusetts Institute of Technology as a servant of industry. The great achievements of the Institute and of its alumni during the war have reinforced the lesson.

4. The one great hope of America is to increase production, to develop new sources of wealth and to improve the means of dealing with old sources. Nothing but the best technical training will serve this great purpose.

5. Technology has been a great leader. Twenty-five years ago Augustus Lowell described it as "pre-eminently a leader in education," and more recently Mr. Thomas A. Edison has pointed to this quality of leadership and expressed his preference for the Massachusetts Institute of Technology because "pre-eminently it is turning out men that the country needs."

6. It must continue its leadership. Owing to its great records of achievement bright young men are flocking to it from all parts of the country and of the world so that the vast plant erected and equipped only three years ago at a cost of eight millions is already overcrowded.

7. The only thing needed to enable it to rise to the level of its great opportunities is more endowment. It needs at least eight millions and Mr. "Smith" will give half if others supply the rest.

8. Its fees cannot be raised further without closing its doors to many of the most promising representatives of the struggling classes. These fees have recently been raised to $300, the highest in the country.

9. As a recent change in the constitution of Massachusetts debars it from the renewal of State support, its needed additional income must come from gifts.

10. Gifts cannot all come from its alumni. The great growth of the Institute has been within the last twenty years so that now there are only about five hundred living graduates more than fifty years of age.

11. All States should help as Technology is a national institution drawing men from every State. It has a body of students at least as widely distributed as regards their origin as any of the oldest institutions of learning in the country. All States profit by the large number of Technology men within their borders and by the great improvements in industrial processes due to Technology men.

12. Gifts should be made as promptly as possible as "Mr. Smith's" offer is conditional on three millions being pledged before the end of this year.

SEPTEMBER 1, 1919.

WHY MASSACHUSETTS MUST MAKE GOOD

An extract from a speech by Dr. Maclaurin

"FOLLOWING the Civil War, the Massachusetts Institute of Technology was founded; and it was founded in Massachusetts largely because it was the centre of industry. It received its early impetus from the tremendous need of technically trained men. Massachusetts capitalists saw the advantage that would accrue to them through having an institution of this character in their midst. And thus was Technology founded.

We are today in a situation that is directly comparable to that following the Civil War. There are the upheavals in the industries, the unsettled condition of the markets, and the spirit of unrest throughout the country. Coupled with these is the high cost of living. Whatever else may be set forth as the solution for all this, econdmists know thoroughly well that this is to be alleviated only by more rapid proouction. This, in turn, depends upon highly trained technical men. It is for this fundamental reason that the Institute is calling upon Massachusetts men to come to its aid.

I feel assured that when they realize the real facts they will not fail to aid. Till now, the large gifts to the Institute have come from interested friends from other parts of the country. 'Mr. Smith' is not a Massachusetts man, while Mr. du Pont, whose gifts have touched the $1,000,000 mark, is a native of Delaware.

The Institute has always been closely identified with the industries. In chemistry, particularly, its graduates have been the potential heads of the large mills of this section. Just before the late war the relations were so far developed that a special course in industrial chemistry was arranged which gave young men practical experience in five important industrial establishments, three of these New England factories. These included paper pulp manufacturing, illuminating gas manufacturing and another special industry in the production of acids. Thirty young men were engaged in this course when war was declared, but the urgent need of the Government for skilled chemists such as these students already were caused the units in the different factories to be speedily scattered.

One of the results of the great demand for chemists during the war has been the very large enrollment of men at the Institute for the chemical courses, so that the existing laboratories are already crowded beyond their efficient capacity, and, if the Institute is not to turn away students in this department, new chemical laboratory buildings are absolutely necessary.

In electricity, likewise, Technology has always been in close touch with the industries themselves, and a result of this has been a course in electrical engineering in which the students study alternately at the Institute and at the General Electric works in Lynn.

Mechanical engineering, too, has also been a study which has been carried on along practical lines, every student obtaining experience in the handling of the tools of the profession. It will be of interest to men who are engaged in the manufacture of machinery to realize that the Technology students are expected to work within the ten-thousandth of an inch.

This group of courses has received much impetus from the war work and it has been found necessary to double almost the equipment of lathe and machine tools to meet merely the requirements of the next years of the school, the preliminary figures of which are already in sight.

These are the courses that appeal most directly to the great industries of New England, but it is foolish to think of increasing them without carrying forward the fundamental studies in mathematics, and the humanistic studies, such as literature and languages, so that the young engineer may have a reasonable degree of culture to match his scientific attainments.

Massachusetts is going to be afforded the opportunity of testifying in the most practical manner to the extent of its appreciation of this great technical school, which has already proved so valuable in the development of its industries."

TESTIMONY

"There is no lack of testimony from competent and impartial witnesses as to the high esteem in which the Massachusetts Institute of Technology is held at home and abroad. Two facts afford the most direct testimony. The first is the extraordinary demand for the Institute's graduates and the conspicuous part that they are taking in the industrial development of the country. The second is the attractive power of the Institute which, in spite of its high fees—the highest in the country—continues each year to draw bright young men in considerable numbers from every state in the Union and from nearly thirty foreign countries. The distribution of its students as regards their origin is wider than that of most of the oldest universities in this country and it draws from foreign lands more than twice as large a percentage of students as almost any other important institution in the land."

Sir William Mather, head of a great industry in Britain and member of a Royal Commission on technical education:

"The spirit and energy of the students, their conspicuous practical knowledge, the thoroughness with which their scientific knowledge is tested in the course of instruction, and the power of adaptation and resource they possess on entering workshops and manufactories, railroads or mines, public works and constructive engineering—all these fruits of the training of this Institute are, so far as I have seen, not equalled on the Continent. I think these are the qualities we need in England."

THE TRAIL OF THE OUTSIDE DOLLAR

I. W. LITCHFIELD, '85

THE alumni have tackled a new problem.

We have raised money before from amongst ourselves, but with only five hundred alumni over the age of fifty years, it is not likely that we can secure the $4,000,000 necessary to match up "Mr. Smith's" generous offer, from former students of the Institute. Our new problem is to get a dollar or two for every alumni dollar, from friends outside our ranks.

This is the most important feature of the campaign. We know that the Tech men will give to the limit of their ability, but outside friends must be seen and the Institute "sold" to them.

This manifestly cannot be done by the members of the Corporation committee or by the members of the alumni committee, individually. Each Tech man must consider himself a committee of one to get some kind of a contribution.

There are many reasons why men of means should assist the Institute. It is apparent that every educational institution is becoming less efficient because post-war expenses have gone beyond all precedent. This is especially true of engineering schools, particularly the Institute, which faces the problem of caring for an increased attendance of fifty-six per cent more students than last year—three thousand one hundred in all. Such an enormous increase in business means that the school must have more capital if it is to furnish engineers and technical men to supply the increasing demands of industry.

Many concerns and individuals have benefited directly by the work of the Institute or its professors or by the assistance of men trained at the Institute. Numberless lines of industry have been benefited appreciably, though indirectly, by both of these factors. The country is now making increased demands which we want to fill but cannot without some assistance from the public.

Without "Mr. Smith's" assistance, the Institute could not have rendered its great service to the nation. If we do not meet this offer of our unknown benefactor, we may lose him entirely and the loss of this friend who has already given $7,000,000 toward technical education and is willing to make it $11,000,000 would be a calamity to the whole country. Tech men will do their utmost to retain his esteem but they cannot meet the stipulation without assistance.

The average salary of an Institute professor is not materially larger than that of the skilled artisan. Our professors are engineers. They are men who can command salaries from three to five times as much as they are now getting. Without these professors, the supply of technical men would quickly diminish.

By the time the REVIEW is published, there will hardly be more than thirty working days available. Do not wait for some one whom you think may be better fitted to approach a prospective giver. DO IT YOURSELF NOW, and if supplementary work is necessary, take it up with your district committee.

The whole Alumni Committee is tremendously in earnest and if the individual work that is now being done in some localities is extended all over the country, the outside donations will be surprisingly large. Classes will be credited with donations secured by members from outside friends.

FIRST COUNCIL MEETING OF THE YEAR

A large and optimistic gathering starts the ball rolling in New England for the big drive

After weeks of preparation, during which time the large central committees have been completing their organization and have been getting the smaller subcommittees into shape, the New England campaign for the new ten million dollar endowment fund for Technology was officially launched when about fifty members of the Alumni Council gathered for a conference in the Engineers' Club on Monday, September 29.

A feature of this meeting was the enthusiasm and the optimism which was shown by every man there. Although informed of the fact other Eastern colleges are asking the public for funds which total around a hundred million dollars and of the fact that Technology has only five hundred graduates over fifty years of age and only a very few who can be classed as millionaires, and of other obstacles which would beset them, there never appeared the shade of a doubt upon the face of any man as to the ability of the Technology Alumni to raise the entire amount in the allotted time, and certainly, if the energy and initiative of these men is indicative of the result, there is no room to question the success of the campaign.

The meeting was presided by General T. Coleman du Pont, '84, president of the Alumni Association. Seated at the table with him were President Maclaurin, Walter Humphreys, secretary of the Alumni Association, George C. Gibbs, '00, George L. Gilmore, '90, Professor Butterfield of Worcester Polytechnic Institute, and A. R. Stubbs, '14.

Although the real business of the meeting was the discussion of the endowment fund plan, those in attendance had opportunity for a little diversion when President du Pont called upon George C. Gibbs, '00, who responded with a very interesting and happy account of the personal side of the Tech Bureau in Paris during the war. The way in which Mr. Gibbs was appreciated was evidenced by the complimentary manner in which every speaker referred to the excellent work done by him in connection with Tech Bureau and other Technology institutions.

Hollis Godfrey, '98, president of the Technology Clubs Associated, former chairman of the National Council on Research, president of the Drexel Institute and a consulting engineer of Philadelphia, Penn., was the next speaker.

Mr. Godfrey explained his plan to make use of the organization of the clubs in the campaign. He explained that the reunion of the Technology Clubs Associated which was planned for the middle of this September and then postponed to October was now to be postponed until after the first of next January in order that all their energies might be put toward assuring the success of the campaign. He will direct the activities of the various clubs through the Philadelphia organization.

In introducing Dr. Maclaurin, President du Pont brought out several good points regarding the campaign. It will be a good stiff job to raise the money, he stated, because one hundred million dollars is being raised at this time by the colleges throughout the country. It must be raised, however, as it is impossible to increase the tuition since it is desired to keep Technology a "poor man's school."

Also it will be necessary to depend upon the younger men as Technology has only fifty-five graduates who are millionaires; it is going to be harder to raise the last hundred thousand than the first two million.

Continuing he said that Massachusetts has forty per cent of the graduates and that it certainly should raise a very large percentage of the fund.

It is his intention to have the committees conduct the campaign through class organizations, fraternities, local clubs, and graduates in foreign countries. The object is to get at a man from as many directions as possible and thereby increase the total number of subscriptions.

President Maclaurin then took the floor and in his talk he told of the necessity of keeping the Institute up to its present standards so that it may continue to be the great benefit to the community and to the country that it has been. He emphasized the fact that reasonable salaries were necessary to keep the high-class instructors and professors at the Institute. His speech in part follows:

"It is within the experience of all of us that the war has swept away the old standards and ushered in a new era when expenditures are necessarily on an entirely different scale than formerly. This change has come upon the colleges so suddenly that they are practically all in financial difficulties and all calling loudly for help. I do not know of any that does not need what it is asking for and I earnestly hope that they will all get what they are seeking. Technology is no exception to the general rule. Indeed there are several reasons why its needs today are abnormally great. It occupies a field of education that is specially expensive, the nature of its business calling for an elaborate and costly equipment and a large number of very high grade teachers. The fundamental problem today is to provide adequate salaries to attract and retain teachers of the first quality for, of course, Technology cannot continue to do the great work that has characterized it unless it continues to attract men of the highest type to its faculty. There is one reason not generally appreciated why a low grade of salary at Technology presents more serious difficulties than at an educational institution of any other type. This arises from the extraordinary demand that there is today for technically trained men. Industry is calling loudly for these men and is ready to offer them salaries very much larger than the Institute can afford. Whereas in some other institutions an increase of salary is based mainly on notions of social justice, at Technology there is the additional and very cogent reason that good men simply cannot be had unless the salaries are raised.

"I have said that there never was a time when the technically trained man was so much in demand and there can be no question that he will be needed vastly more in the future even than he is today. The social unrest that characterizes our time will not pass by mere talk. It can only be allayed by increasing the wealth of the country and this inevitably means greater production, the discovery of new sources of wealth and the improvement of old means of manufacture. There is no part of the country where this should come home to thoughtful minds with more telling force than in Massachusetts and New England where industry is practically the sole source of wealth. A generation ago Augustus Lowell described Technology as 'pre-eminently a leader in education' and what a few exceptional men such as he saw in his day is clear to almost every one now, that Massachusetts and New England cannot continue to be prosperous without just such leadership as Technology affords.

"Technology ought to have ten million dollars and must have at least eight. Of this Mr. Smith generously offers to give half if the other half is forthcoming within a reasonable time. He does not come from Massachusetts and a very large part of the Institute's resources has come from men outside this Commonwealth.

There is reason for this as these generous benefactors recognize the national character of the institution, but of course they expect generous men in Massachusetts to support an institution that their forefathers founded and that is in a sense peculiarly theirs. The alumni of Technology have always been loyal and generous but not one man in a thousand appreciates the fact of fundamental importance in such a campaign as ours — that the alumni are altogether too young to be able to make large contributions. The Institute was a very small affair during the first thirty years of its existence and far more than half of its alumni have gone forth within the last ten years. There are not many more than five hundred of its graduates alive today who are over fifty years of age. This youth of the alumni is a splendid asset for the future, but for purposes of direct contributions of money it places the Institute in an unfavorable situation as compared with other institutions that have had large numbers of older and richer alumni.

"I have no doubt that generous citizens in Massachusetts will support the Institute if they know its needs and the alumni must help in making those needs known. It is held in high esteem everywhere and special emergencies have for a time focussed attention on its possibilities for service to the community. Recently, as you know, Technology men did an excellent service in organizing the Fire Brigade to protect the lives and properties of people in Boston in case the firemen followed the unfortunate lead of policemen. Happily, they remained true to the city. The great services of Technology during the war have made a great impression on those who know it, but the story is too long to take up now. The single fact that Technology alumni entered the national service by the thousands and that nearly seventy-seven per cent of them became officers indicates the value of technically trained men in the great emergency of war. We want, however, the citizens of Massachusetts to understand that these men have an equal value in the relatively quiet times of peace. Fortunately, in this respect Technology can point to the actual achievements of its alumni. I need merely speak of what it is hoped can be done in the future. It is easy to point to the great savings that have been made in industrial processes by the accomplishments of Technology men and to the great developments in industry that have been brought about through their initiative. 'I like the Massachusetts Institute of Technology,' says Thomas A. Edison, 'because it is turning out men that the country needs.' To continue to turn out these men we need now the practical support of generous men throughout Massachusetts and we naturally look primarily to those who are engaged in industry and appreciate the growing importance to industry of the technically trained man."

An address which gave many new ideas to the alumni and which was greatly applauded by them was one delivered by Professor Butterfield, of the Worcester Polytechnic Institute, in which he gave some of his ideas about such a campaign. Professor Butterfield was especially invited to attend this meeting because of the fact that he was at the head of the Worcester Alumni drive at which work he was exceedingly successful, obtaining subscriptions from ninety-eight per cent of the alumni.

Professor Butterfield pointed out that the personal approach was the only way and explained that during his campaign he found it necessary to travel all over the United States. He also emphasized the necessity of having a definite sum for each man.

Two very forceful mottoes given by him and which are very applicable are:

"It can't be done, but here it is."

"Plan your work, then work your plan," and also the well known French saying, "What can be done has been done; what can't be done will be done."

Following Professor Butterfield, Arthur R. Stubbs, '14, outlined the plans which he, as executive assistant to President Maclaurin for the drive, will carry out.

Mr. Stubbs has just returned from a tour of the Middle West during which he visited Syracuse, Buffalo, Niagara Falls, Detroit, Chicago, Milwaukee, Indianapolis, Cleveland, and Akron. He reported that interest throughout these parts of the country was so intense that everywhere loyalty and enthusiasm predominated. He succeeded in getting an organization working at every place.

Mr. Stubbs intends to have an intensive campaign in New England during the first two weeks in November. For this campaign all the members on the various committees will be furnished with convincing arguments as to why Technology needs the money. He intends to use advertising methods and thereby " sell Technology to America."

Mr. Stubbs is going after the younger men to " give or get $1,000." His argument to them is that every Technology graduate has a moral obligation to the Institute of two thousand dollars. This is figured upon this basis; every one paid two hundred and fifty dollars a year tuition. The cost to the Institute for their education was seven hundred and fifty dollars a year or two thousand for four years which was contributed to them.

Counting that there are twelve thousand available alumni and assuming that all funds are to be raised by them it is only necessary that one-third of them pay half of their moral obligation in order that the required four million be raised.

In order to bring in large industrial concerns which are unable to contribute money outright, Mr. Stubbs has a plan whereby they may give for certain definite services rendered; such as the use of Institute libraries, laboratories, and research facilities.

The talks by the speakers were followed by a very interesting discussion. Several of the delegates from outside New England promised that their districts would reach their quota.

NEW BY-LAW OF THE ALUMNI ASSOCIATION

The following new by-law is recommended by the Alumni Council for adoption.

ARTICLE 1. Section 6. The elected officers of the Association shall take office each year at a date fixed by the Council and not later than July 1.

A change in the following by-law is recommended:

ARTICLE 6. Dues. Section 1. The annual dues for regular members shall be $1.00 and with subscription to the TECHNOLOGY REVIEW $2.00; those for sustaining membership shall be $10.00 including subscription to the TECHNOLOGY REVIEW, and honorary members shall be exempt from payment of dues.

The Council recommends that this be changed to read:

ARTICLE 6. Dues. Section 1. (Revised 1919.) The annual dues for regular members shall be $2.00 and with subscription to the TECHNOLOGY REVIEW $3.00; those for sustaining membership shall be $10.00 including subscription to the TECHNOLOGY REVIEW, and honorary members shall be exempt from payment of dues.

THE GREATEST REGISTRATION IN TECH'S HISTORY

A jump of 50% over last year — crowded a year ago, jammed today

To date, a total of three thousand, one hundred students have registered here at the Institute. This is an increase of about a thousand over last year's numbers, and is far in excess of Registrar Walter S. Humphreys' most liberal estimate. The cause of this overflow seems to lie in the sudden influx of men from other colleges. The upper classes remain of about the same strength and the sophomores hold their own, while the freshmen number only six hundred and thirty-five.

These figures which were given out at the registrar's office Tuesday, represent very accurately the number of men who will study at Technology this fall, for only a few stragglers are now signing up and the number of these will be offset, it was stated, at the office, by those who drop out of school for one reason or another.

The most surprising part of the large registration is not that it is greater than last year's, but that it so far outnumbers the registrar's estimate. At the close of school last June, there were in school nearly two thousand students and of those eighty-six were graduated, seventy with Bachelor's and sixteen with Master's degrees. It was estimated by Mr. Humphreys that the registration this fall would be about two thousand three hundred, and he set as a maximum figure, two thousand five hundred. The total of three thousand came as a distinct surprise.

The factor which pushed the total above the three thousand mark was the great number of men transferring to the Institute from other colleges. The exact number of these is not known; in fact the registration office has been too busy to do any extensive tabulating of figures, but the figures by classes show that transfers and only transfers can account for the increased registration. The freshman class numbers six hundred and thirty-five this year, which, while an increase over last year, would not be sufficient in itself to boost the total as high as it went.

The sophomore class numbers approximately one thousand, the junior class about eight hundred, while the seniors are four hundred and twenty-five strong. The total is filled out by special and unclassified students.

The entering class was assembled in Smith Hall Monday, October 6, and addressed in the absence of President Maclaurin by Professor Henry P. Talbot, head of the Department of Chemistry and by George C. Gibbs, '00. Mr. Gibbs has returned from France where he was head of the Technology Bureau of the American University Union in Europe.

Due to the fact that the registration exceeded all expectations, a little overcrowding of classes was experienced the first few days of the week. A few transfers and splittings-up of sections remedied this however, and classes are now proceeding about as usual. Among the courses hard hit in the matter of overcrowding were freshman Chemistry and third year Political Economy. In the latter course where small sections are especially desirable, Professor Dewey, head of the Department of Business Engineering Administration, was kept busy early in the week arranging a satisfactory remedy for the situation.

THE WAR RECORD BOOK IS IN DANGER OF FAILING!

THE Alumni Committee of the Technology War Record Book offers the following startling facts for the earnest consideration of every alumnus who has the Institute's honor at heart.

Two thousand one hundred and seventy-five alumni are LOST. We have no addresses for them.

Fourteen thousand alumni are on our mailing list and have been sent blanks for the War Record.

Two appeals have been sent out already.

Four thousand five hundred replies have been returned.

Nine thousand five hundred replies are still missing.

And two thousand one hundred and seventy-five men are lost.

It will be impossible to publish a book with the records of more than fifty per cent of our alumni MISSING. It would be a farce.

From 1868-1878 the average percentage of replies received is about twelve per cent.

From 1878-1908 the average percentage of replies received is about twenty-five per cent.

From 1908-1918 the average percentage of replies received is about thirty-five per cent.

Most of the men in active service, i. e., the younger men, have replied very well.

But the alumni who worked at ESSENTIAL INDUSTRIES have not apparently thought it worth their while to answer.

Eight hundred only of men in essential industries have returned information.

This is serious! The Institute is offering as one of its arguments for a larger endowment, the fact that the war was won largely by industry, in which Tech men played an important part.

How can we back up that argument with only eight hundred records?

Whether you consider your work as war work or not, send in the facts and let the War Record Committee judge. Don't let modesty or misunderstanding, or just plain negligence ruin our argument.

FURTHERMORE the War Record card catalogues are the latest information the Endowment Fund Committee possesses. To raise ten million dollars for Technology every man must be seen personally. Incomplete records IMPERIL Technology's future.

FINALLY, our last alumni register dates from 1915. A new one is planned to be issued at the all-Technology gathering in June, 1920. It will be based on the addresses in the War Records office.

The importance of the list is therefore THREE-FOLD. It must not fail. It must be complete.

Don't wait for a "follow-up."

Send back your record AT ONCE!

TECHNOLOGY WAR RECORD COMMITTEE,
Massachusetts Institute of Technology, Cambridge.

HELP MAKE THE WAR RECORD PERFECT

The story of the book — many replies missing — no further delay possible.

THE staff now working on the Institute's War Record Book has struck a snag, and unless the majority of the alumni soon wake up, the story of Technology's part in the great war will stay untold for a long time. The trouble is that answers to the circular asking for information needed to make up the book are not forthcoming, and John H. Ruckman, '10, the editor, can do nothing until he hears from the delinquent alumni.

The new book is to be a permanent record, and since this is the case accurate information and full particulars are needed. The individual records and stories can come only from each man personally, for it is the personal stories and viewpoints that are wanted. Technology has a list of nearly sixteen thousand former students who are now living. Two thousand or more undergraduates bring the totals up to a good eighteen thousand men, and of this number comparatively little is known. Fourteen thousand circulars were sent out, and up to date four thousand, four hundred and forty-four replies have come in. However, with the help of records of " The Tech " and the Alumni Association, about five thousand five hundred former students can be accounted for. This is without counting the undergraduates, but Mr. Ruckman says approximately eleven thousand men from the Institute have shared in the burden of the war, either directly while at the front or indirectly in some kind of essential industry. Consequently, knowledge concerning about half the men is now at hand, and since this is obviously insufficient, more must be obtained.

Circulars and blanks were given to the staff and undergraduates and the answers to these should be in soon and raise the total about five thousand.

Princeton University has already put out her book, and unless Technology hurries up Mr. Ruckman '10 fears that she will be the last of the colleges to tell her story. Twelve thousand more circulars have just been sent to alumni who have failed to answer the first letter, and this lot was marked " urgent."

Many of the alumni are practically lost to the Institute now, letters have been returned unanswered and the class secretaries can give no information. If no word is heard from these men, Mr. Ruckman '10 feels sure that many interesting stories and much useful information will be lost. He urges all who have not yet sent in their letters to do so soon, for if results from this last circular are not forthcoming, another will have to be sent out and much time wasted, whereas if the majority answer now, time can be spent concentrating on the missing alumni and the book will be out all the sooner.

Mr. Ruckman says that the Alumni Association is back of the book with the object in view of getting copies into the hands of every Technology man, and that making money is not desired. Up to date three thousand one hundred and five copies of the book have been sold. Of this number nine hundred and fifty-seven have already been paid for, while the undergraduate subscriptions have not yet been counted. Five thousand three-dollar and one thousand ten-dollar books are the goal of the editor. Provided that answers come in as they should, Mr. Ruckman, '10, expects to have copies ready in time for the big reunion next June.

The Technology War Record is a volume which is being published to furnish a permanent record and an interpretation of the contribution of the Massachusetts Institute of Technology in the Great War of 1914-1919. President Maclaurin, in a letter to Dr. Tyler '84, who is chairman of the War Records Committee, said, "The achievements of Technology Alumni during the war were indeed remarkable, and it would be a matter of great historic interest to all those associated in any way with the Institute to have the records as complete as possible. I feel, therefore, that the task of your committee is one of high importance, and I hope that you will succeed in securing the active co-operation of all concerned. It is quite important that the records should be complete and this can only be done if every Alumnus realizes his duty of securing completeness by reporting his own services. I fear that unless men are urged to fulfill this duty they will fail through some misleading idea that modesty should debar them from giving a record of their own accomplishments."

According to the latest returns there were three thousand, five hundred and eighty-one former Institute men in the service, two thousand, five hundred and seven of whom were commissioned officers. Few people realize that the Institute was second only to West Point in number of officers furnished the regular army previous to the war, and that seventy-one per cent of all the Technology men in service were commissioned. Of our one thousand, four hundred and fifty-seven men who served overseas, one hundred and thirty-two were decorated for valor or meritorious service. One hundred and twenty-one Technology men lost their lives in the service of their country.

John H. Ruckman, '10, who is the editor of Technology War Record, says that the men who were actually in military service accomplished by no means the full measure of what Technology did. We have on our Alumni list nearly fourteen thousand former students in addition to the undergraduates, all of whom hold positions of more or less importance all over the country, and contributed to the national defense in various ways. The important part that Technology men play is easily illustrated by stating the following cases.

The International Shipbuilding Corporation was organized practically by our alumni. The duPont powder plants are practically owned and controlled by Institute men. We have a large number of men in the Bureau of Standards who are worked on the scientific problems of the country. Another alumnus is the vice-president of a company which produced lead, zinc and sulphuric acid for the Government, in tremendous quantities. Still another man, who is with the Hercules Powder Company, developed a method for obtaining potash from kelp, or ordinary seaweed. It was this discovery which supplied us with potash after Germnay had been shut off as a source of supply. Other former students served as instructors for men in the army and navy and the merchant marine. They also trained mechanics to go into the ordnance department or into shipyards.

It should be made clear that these examples are taken altogether at random.

When we first went into the war the American observers could hardly see through the field glasses that were furnished them. We had always obtained optical glass from Germany and did not know how to make it. It was a Technology man who went into the subject and was largely responsible for the production of optical glass that was as good as Germany's.

No human progress has ever been made which was not the result of experience. It is the idea of the War Record Committee to record facts so that experience may be utilized, and make a permanent record of the work of the Institute and its former students. The War Record Committee is composed of H. W. Tyler, '84, chairman, Walter B. Snow, '82, T. C. Du Pont, '84, ex-officio, Harry H. Young, '91, O. D'W. Morey, '05, Walter Humphreys, '97, Ex-Officio, H. G. Pearson, Faculty.

The book, The Technology War Record, will be made up of several chapters, the first of which will deal with the Institute and its staff as an institution for education and research. This chapter will include the records of the ground school for naval aviators, the training school for shipping board officers and engineers and naval cadets as well as the training of our own undergraduates for future service. The research work which was carried on at Technology will also be taken up in this chapter. Practically every department here accomplished some scientific feat worthy of mention. The Mechanical Engineering Department under Professor Miller built the forty-ton tank " America," while in the bacteriological laboratory, important sanitation questions were being worked out and in the Electrical Engineering Department experiments were being made on a very delicate and complicated instrument for the detection of submarines.

The second chapter deals with special Technology auxiliary services such as the Massachusetts Institute of Technology Committee for National Service and the local committee which was originated for the same purpose and finally became the Massachusetts Institute of Technology War Service Auxiliary.

The third chapter deals with the work of the former students who went into the service. In this chapter autobiographies will be given of all the men who lost their lives. There will be photographs of the men who were decorated, and where obtainable their official citation. The rest of this chapter will be devoted to incidents of war as seen by the men. It is expected that this part will be truly interesting, as at least one Technology man was present at every large battle on every front during the war. The Institute was represented in the famous Foreign Legion as well as in the Lafayette Escadrille. Some of the men who went across in the original Technology Ambulance Unit are entitled to eight stars, one of which represents a major engagement.

There were Technology men in the Princess Pats and among the Anzacs. Institute men were over the North Sea in planes; they were under it in submarines and on it in destroyers. It is hoped that men who have served and have incidents of interest, will hand them in so that Technology's record may be made as complete as possible.

The fourth chapter treats of the services of present and former students in Government and officially recognized auxiliaries. This has been a war of great industries, and in order to co-ordinate the work of the military authorities with the work of the industries, it has been necessary to form several councils and committees. The more important of these are the Council for National Defense and the National Research Council. Dr. Hollis Godfrey, '98, is a member of the Council for National Defense, and Dr. George E. Hale, '90, and Dr. A. A. Noyes, '86, are members of the National Research Council. In addition to these were a large number of Institute men on the sub-committees of both of these councils. The experiences of our men were nothing short of extraordinary. For example, one was sent to Russia by the Government to buy metallic platinum. He had managed to buy a ton and had it in his possession when the government was overthrown and the Bolsheviki came into control. It is needless to say that his adventures in getting the treasure out of the country were, to say the least, thrilling. Another man who was sent out in search of material suitable for the manufacture of alloy steels was caught in a hurricane off the coast of New Caledonia. The ship struck a reef and was nearly pounded to pieces. The part in which the passengers were quartered was all that was left of the ship when, after twenty-four hours, they were picked up.

Of the former students who were in the Red Cross and similar organizations, not directly under the control of the government, the larger proportion sooner or later joined the service. Nevertheless, their experiences while in these organizations are of great interest. One party of twelve Institute men was working in Serbia at the time of the great German drive and were required to retreat with the Serbian army in their retreat to the sea. Another, Bonta, '97, was doing Young Men's Christian Association work in Russia at the time of the revolution, and stayed even after the Bolsheviki gained control, and did not withdraw until the Americans took active part. He escaped only by extraordinary good luck.

The next chapter of The Technology War Record deals with the work of the former students of older classes in essential industries. It is needless to say that a school training engineers and chemists will, in time of war, find practically all its alumni occupied in essential industry. The number of industries in which Institute men have been interested is too large to describe. It is, however, worth mentioning that some of the largest companies which constructed cantonments were owned and controlled by men from Technology. Many of the great housing and similar organizations were under the direction of Institute alumni. The recruiting service of the Shipping Board was also under one of our alumni. A Tech man discovered that cadmium in zinc is not injurious when the metal is to be used for certain purposes, and saved the Government a great deal of time and expense as the zinc containing cadmium had previously been considered useless. Other men in brass works were called upon to furnish piping for one hundred and thirty-two ships in six weeks. The required amount of piping was more than the firm had ever made in five years. The Technology men spent the first three weeks in building a new machine, not doing any direct work on the contract. In the next two weeks, with the aid of the new machine, they made one hundred and thirty-two sets and delivered them a week before their time was up.

It is expected that the Technology War Record will be ready for distribution in June of 1920. The first circulars, which contain blanks to be filled out concerning war service, have been sent out to all former students. Two thousand, five hundred have been returned. Sufficient of the second circulars have been returned to bring the total to four thousand four hundred and forty-four, but this is not fast enough to complete the book in the allotted time. Editor Ruckman requests that all circulars be filled out immediately and returned. The undergraduates received these circulars on registering for the fall term. It may be necessary to send out a third circular.

The book will be gotten out in two editions, one selling at three dollars, the other at ten. The first will be cloth bound and will be sold under cost. The second edition is to be bound in leather and is to have gilt-edge pages. A slight profit is to be made on this edition. It is hoped that every man connected with the Institute will subscribe for one of these books. They will be about the size of the 1918 Technique and will have somewhat the same internal outlay as the 1919 Technique.

The book will contain about seven hundred pages, approximately eight by ten and one-half inches. It will probably be printed on white or ivory tinted paper, each page having a border of olive or burnt sienna.

The last two chapters will contain the record of all Institute men who were in Government service or in essential industries. It will not be possible to give the full record, but the statements will be made as complete as possible. It will state whether or not the man served overseas, and will give the dates of important events, such as promotions and transfers, battles in which he took part; if wounded, where and when. If the man was decorated the citation will be given briefly, along with the date. The same data will be given on those who were in militarized auxiliaries.

This section of the book will naturally be the most difficult to get together, as it will require more careful attention to get the records uniform, brief, and at the same time to have them convey the information as they should. These last two chapters will be used mostly for reference work.

The descriptive chapters, on the other hand, are extremely interesting, as they are accounts of incidents in which the writers themselves took part. Many letters are daily being forwarded to men whose application blanks look interesting, and the replies are coming back with every mail. That every reply contains a story worth reading can easily be shown by quoting a few. One man recollects that the most remarkable sight that he saw was the destruction of a captive balloon by a hostile plane, which escaped. The observer also escaped, but only by means of a long drop by parachute. A little later another story comes in which tells of how the writer had once been shot down by a hostile plane when up in an observation balloon. By comparing the places and dates of the two incidents they are found to be the same. One of our men in the English Air Service blundered into a "dog fight" and found himself singled out by no less than the noted Baron Richthoffen. The baron had just shot down his eighty-first plane and the Tech man would have been the eighty-second had he been a little less adroit or his Sopwith a little less speedy.

An extraordinary fact, which must have impressed every one, is that more Institute men were decorated for valor than died from all causes combined. This either proves the old theory that the man who goes into the thing hardest is in the least danger, or that our men were extremely lucky. The reply blanks show that this is constantly borne out. More than fourteen hundred of our former students were members of the American Expeditionary Forces, and the majority of these were in either the Infantry, Artillery or Air Service, the three branches in which the largest number of casualties to officers occurred. The amazing fact still remains, however, that only twenty-five of all the Institute men in service were actually killed in action and died from wounds.

One might at first think that this small number of deaths was due to the fact that our men were stationed in quiet sectors, but it was to the contrary. We had men at Cambrai in November, 1917, at Jaullgonne Bend of the Marne on July 15, 1918. We had a number of men in the Second Division at Belleau Woods in June of 1918. Our men took part with the Twenty-Sixth Division in the terrible assault on Hill 190. When the engineers of the First Division passed through the infantry to deliver their last thrust toward Soissons a considerable number of former students of the Institute went with them. Our men helped to bridge the Meuse at Consenvoye and took part in the storming of Montlancon. They took part in the assault of the Argonne Forest across the valley of the Aire. As might be expected they were on hand when the passage of the Meuse was forced at Dun.

It can easily be imagined of what interest these stories are in comparison with those told by newspaper men, who seldom advanced beyond headquarters, and obtained material from official telegrams and wounded men. The Technology men were, on the other hand, in the very thick of the fighting and, in their stories, tell what they actually saw, with their own eyes, or what they actually experienced.

In order to obtain complete information for the War Record, blank forms have been placed with the registration material of each entering student.

The book endeavors to make a permanent record of the work of Technology's living former students and undergraduates in order that these also may be remembered. Quite recently another phase has come up, which was uncontemplated at the inception. During the war many discovered that one of the most important assets which any organization, whether school, association or corporation, could possess was an indexed list of a great number of men showing their technical training, experience and natural aptitude. As a great many of our former students received the most valuable experience of their careers in either military or essential industry activities the Technology War Record files actually become a classified list of some of America's best engineering talent. This act has been very sharply brought out during the past few weeks, for many Institute men seeking re-employment have referred their prospective employers to the Technology War Record Committee and the record is accordingly being used to supply authentic information relative to qualifications of our former students. This is especially true of the men of the recent classes.

The flight of the N-C boats across the Atlantic is an event which is still fresh in our minds, and it may surprise some to find how largely a Technology affair it was. Commanders J. C. Hunsacher, '12, G. C. Westervelt, '08, and H. C. Richardson '08 were practically responsible for the entire design of the boats. The construction of the ships was carried on under the supervision of Lieutenant(J. G)., George T. Woolley, '15. The hull for the N-C 4 which finally completed the trip, was built by the Herreschoff Company under the direction of James Swam, '91, general director. The motors were built by the Packard Motor Company of Detroit and officially accepted by W. H. Turner, '18. The great hangars for the reception of the planes at Rockaway were built by John G. Ahlers, '10. After the ships had been delivered it was necessary to " tune them up " for the long journey across the Atlantic. It was Lieutenant, J. G., Raymond P. Miller, '18, who was detailed as power plant inspector, for the N-C ships at both Garden City and at Rockaway. Lieutenant, J. G., Charles G. McCarthy, '16, who had previously worked on the ships accompanied them on the trip from Rockaway to Trepassey Bay, Newfoundland, on board the N-C 1, and when the ships started on their long and dangerous trip across the Atlantic Commander H. C. Richardson, '07, of the N-C 3, after a plucky battle with fog and sea, brought the ship safely into harbor at Ponta Delagarda in the Azores.

The trip of the N-C boats has been given here merely as an example of how great a part Institute men played in the most important events of the war. Hundreds of such cases could be quoted. A case is on record in France in which a Technology man, soaring over the lines, sent a wireless message to an operator who was also one of our former students. This operator sent the message to an artillery information officer who was a Technology man, who, in turn, transmitted the message to the battery commander, who as you have already guessed, was also a former student of the Institute.

All these things will be of interest to every Technology graduate. They are things which he ought to know about and will want his friends to know about; so it is accordingly expected that every graduate will subscribe to the Technology War Record.

THE TECHNOLOGY BUREAU OF THE AMERICAN UNIVERSITY UNION

Report of the Director, George Crocker Gibbs, '00, from March 20, 1918, to closing, August 1, 1919

INTRODUCTION

A. The Selection of the Director.
B. The Director Sizes up the Situation.

A. The Selection of the Director

Mr. Gibbs' first knowledge of the Tech Bureau was through the notice in the "Tech" in July, 1917, of the formation of the Tech Club of Paris by V. R. Lansingh. Mr. Gibbs was then Rector of the Church of the Redeemer, Okmulgee, Oklahoma. Shortly after this Mr. Gibbs was offered a chaplaincy in an Engineer Regiment then forming in St. Louis, Mo. This was finally refused by the Adjutant-General's Department in Washington, on the grounds that no more Episcopalian chaplains could be appointed at that period.

In November, 1917, Mr. Gibbs, having resigned his charge in the west, came to New York City, as assistant minister at St. Anne's Church in the Bronx. He took out a resident membership in the Technology Club of New York, and used the Club frequently.

On Christmas night, 1917, he was one of four graduates who had their Christmas dinner at the Club. Howard L. Coburn '98, was present. He spoke of going to Paris as Director of the Technology Bureau and Mr. Gibbs asked if there were any service where he might fit in also. Later, to his great regret, Mr. Coburn had to give up his much cherished plan and asked Mr. Gibbs if he could take his place. Mr. Gibbs consented immediately, and after conferring with the committee in Boston, he was selected.

This was an essay of faith on the part of the committee, but their confidence in Mr. Gibbs' unknown ability was strengthened by their own great confidence in "Pa" Coburn. Mr. Coburn's death was a great loss to the alumni, and probably no graduate had a wider acquaintance with Tech men and especially those of the later classes, and was much beloved.

Mr. Gibbs resigned his position in New York City, obtained the consent of his Bishop, the late Dr. Greer of the Diocese of New York, and sailed on March 6, 1918, on the French line steamer "Chicago," and after a pleasant, calm and uneventful voyage arrived at Bordeaux, France, on March 19, reaching Paris on the following day.

B. The Director Sizes up the Situation

Previous to the Director's arrival, the affairs of the Bureau had been conducted by Lansingh, combining this with his duties as Assistant Director and Business Manager of the Union, and up to February, '18, he had as Assistant Director, Robert M. Allen '16. Most of the active work of the Bureau had fallen to Allen, who was assisted by Miss Alice Beakhurst, the Bureau secretary and stenographer. Allen had a wide acquaintance with Tech men, having been a member of theTechnology Unit, American Field Service. Allen kept the affairs of the Bureau very active, and made the boys who visited welcome and cared for many wants and pleasures, carefully registering our men in service and conducting a wide correspondence with them. On February first he entered the French Artillery School, with many other Americans, among them Elwell '19, to prepare for a Commission in that branch of service of the French army. His splendid service and interest were a loss to the Bureau. Lansingh and Professor George Nettleton, Director of the American University Union, went to England in March to start the London Branch of the Union. The affairs of the Bureau were left in the hands of the secretary, Miss Beakhurst, and on Mr. Gibbs' arrival there was much to be done.

In about a week or two the Director sized up the Bureau's work and needs in general and his succeeding direction was based on two simple principles which he deduced.

These were: 1. Personal Contact.
2. Specialization in Tech men.

1. The boys who visited the Union desired a little personal interest to be shown in them and their interests by the Directors of the Bureau. They desired a welcome, and appreciated any little favor shown to them unsought, and unasked, which at any period at home before the war they would not expect or desire, because they were away from home and familiar surroundings. The Director stood in " loco parentis," he must be a friend, counsellor (if desired), companion, and a general bureau of information.

2. The Director found two definite features making up the work of the American University Union, intensive and extensive.

Extensive: The Union being in its inception, academic, a growing interest was being established between American educational affairs and those of the French universities. This was natural and the officials and some of the Bureau Directors were identifying themselves with this work. This feature promised to be the permanent feature of the work of the Union.

Intensive: The formation of the American University Union was primarily a war relief measure, its purpose to maintain a University Club in Paris, as a center for all American University graduates and their friends in the service of their country and of the American Expeditionary Forces. The Union offered an American atmosphere, familiar to Americans at home, also providing rooms and meals at reasonable prices. Here was a splendid meeting place for old acquaintances, and the home and friendly features were much sought and appreciated.

The work of the Bureaus of the Union were to " specialize " in that which the Union must make " general." Many colleges had no special bureaus. The Director thinks that possibly that side of the Union should have been more thoroughly developed as the intensive work of the Union was first and foremost in its establishment. Men whose college had no special bureaus were taken care of in general by the Union, through its offices, and had the club and hotel features in common. Therefore Mr. Gibbs, realizing that a divided interest is fatal to good success, specialized in the development of the Bureau and made the Tech man the subject of his interest and personal attention. Of course the Tech Bureau welcomed many men who had no Bureaus in the Union and many sought it out more than once. Any man who had ever attended Massachusetts Institute of Technology was considered a Tech man, and Mr. Gibbs made it his interest to find every Tech man in Europe and link him up to the Bureau and to Massachusetts Institute of Technology.

That objective, of course, was not entirely possible, but the principle brought the maximum of results.

The Bureau was not to be considered as a business office; all routine, though necessary, was placed second to the personal reception of men. Men must be welcomed and made at home, and details of work put aside for his comfort and pleasure.

This proved to be the right "dope," and the Bureau won the interest and gratitude of the men who visited it, and of many who never had the chance to come to Paris. Let it be realized that the Bureau proved to Tech men abroad that they belonged to Massachusetts Institute of Technology and that Massachusetts Institute of Technology was behind them "over there"; a real "Alma Mater."

IN THE WAY OF ACCOMPLISHMENT

A. The Underwriters

The Underwriters may be classed under two heads:

1. The Alumni, represented by their Special War Service Committee.
2. The Auxiliary.

1. The Alumni.

All Tech stood behind the Bureau, this included its Faculty from the President down, and all the Alumni and former students.

These were represented by a special committee; J. W. Rollins '78, the Chairman, Tyler '84, Eaton '85, Humphreys '97, Bemis '93, Gilmore '90, Professor Pearson.

This committee represented the general interest of the alumni. The funds for the Bureau's work, and for membership in the Union were generously furnished by the graduates and former students, the Corporation, and personal gifts. There was never any question of the financial needs of the Bureau. This organization which backed the Tech Bureau was entirely adequate and gave the Director a confidence and solidity on which he could rest securely.

Then the committee in turn reposed such confidence in the Director when they chose him and sent him over, that this trust was his inspiration and security and helped him in his accomplishment. When thanking the committee for this constant kindness, help, interest and generosity, he is at the same time extending it to the Alumni as a whole.

Although members of the Faculty as well as separate Alumni; a backing of Alumni, as such, was quite the proper backing for such an institution as the Tech Bureau, as a war relief measure, which it was primarily. Otherwise the tempting problems of international education must have tended to dissipate the energy which primarily belonged to the personal interest of college men in the American Expeditionary Forces.

The Tech Bureau was one of the most efficiently backed bureaus of the Union. Its support was unfailing, entire confidence was maintained in its ventures, and the management at home was efficient.

Mutual confidence between the Director and Committee was the result.

A little saying got abroad in the Union that Tech was the richest bureau there. Exaggerated perhaps, but perhaps caused by the use which was made of its funds. They were all devoted to making the Bureau effective and attractive to its men, and placing them to the best advantage of its men. E. P. Brooks '17 said that here was no element of "stinginess" about the Tech Bureau.

Of course other bureaus were well manned and equipped, but not one had behind them this other element which contributed so materially to Tech's success; namely, the Massachusetts Institute of Technology War Service Auxiliary.

2. THE AUXILIARY

Words of praise here are all too inadequate to give enough credit to this thorough, efficient, and whole hearted work of devotion by the women of Technology to the needs of Tech men in service, on both sides of the Atlantic.

This report can only speak of the effect of their work " over there."

"Let us now praise the famous women of Tech." All praise and credit to Mrs. E. C. Cunningham who in the name and memory of her husband Mr. Edward Cunningham '91, inspired this work, and with unfailing, untiring, and continually new creative energy and imagination, brought this organization into active and thorough effectiveness. Her photograph hung over the Registration Desk in the Tech Bureau, adorned with a cockade in the colors of Massachusetts Institute of Technology. In a few months, Tech men over the whole field of the American Expeditionary Forces in Europe knew who Mrs. Cunningham was and that she and the organization were working for their interest and comfort.

To the Director her letters were a big source of inspiration, as they had been to Mr. Lansingh and to other officials of the American University Union.

Entire devotion, indefatigability and large vision are the attributions which she brought to us in this service.

In the Executive; the Director was in closest touch by correspondence with Mrs. Alice N. George the secretary of the Auxiliary, who held together the various lines of the Organizations and brought them within the reach of all objectives. Through her efforts the Auxiliary was linked to the Paris Bureau and thence to the men in the field. Hers is a record of tireless service, always efficient, and always getting results.

All of the trunks, about twenty-two of them sent to the Bureau arrived intact, and about all of the packages sent by parcel post. If the Bureau communicated a need, it was always fulfilled — sometimes almost by anticipation.

Reports were made to Mrs. George by the Director each week. And from her came introductions from or to men coming over; reports of work; lists of men en route to France; inquiries of all kinds, including many cables regarding the casualties or missing men which the Director sought out as he was best able, and reported by cable either directly or through the Red Cross Communication Service. Also suggestions for many little services to men and their friends which became a pleasant duty for the Director.

Mrs. George brought to the Auxiliary an able executive, thoroughly efficient, and always productive of results, and through Mrs. W. T. Sedgwick who headed the workroom, and with whom must be included all the devoted workers who made up that department.

Here was devotion and a labor of loving service. And it all had its responsive appreciation on the other side.

The Director received either directly or by letter countless thanks and gratitude from Tech men and others who received the gracious gifts from the Auxiliary. Many wrote by letter directly to Mrs. Cunningham, Mrs. George, or Mrs. Sedgwick, or later to Mrs. Bigelow their personal appreciation. Many boys offered to pay for these gifts. This was always met by a decisive refusal and an explanation. Technology's women as well as Technology's alumni were behind every man in every Service, his need, even his almost unspoken desire were heeded, anticipated and ministered to.

Each trunk when unpacked gave a thrill each time of a Christmas Box, or one from home, and they were often unpacked by the boys in the Bureau, who never left without a few prizes.

The Auxiliary and all who made up its ranks, is a record of action and deed, and where these both counted for most.

IN THE WAY OF ACCOMPLISHMENT

B. The Bureau Itself

The work of the Technology Bureau, situated in the American University Union, as one of its component parts, was to specialize in that work which in general was done by the Union itself. This work was to provide a homelike, friendly, free American atmosphere, for American university men and their friends, in the service of America abroad, when they came to Paris, or to minister in any helpful way to them whenever they were in Europe as its abilities allowed. Men in the American Expeditionary Forces, the American Red Cross, the Young Men's Christian Association, and in civilian service for the United States were welcomed, as well as Americans abroad in any other capacity. Besides these many officers and men of the various allied armies found a warm welcome, and many of the Faculties of the French universities.

The Tech Bureau's welcome included many men who were graduates of other universities.

The Tech Bureau served to interpret and carry out the wishes, desires, and help of the alumni at home to those abroad, to show them that Technology had followed them abroad and was with them there. It served to bring the work of the Auxiliary within the reach of those for whom it was intended. It was a Tech Club, and a home for Tech men in the Union. One thing is sure, Tech men liked it, and used it, and backed it.

IN DETAIL

1. Correspondence.

The correspondence was large and was maintained for all purposes with over eight hundred men. The following are a few figures totalling the amount of this correspondence.

	Letters Received	Letters Sent Out	Total
In 1917	638	807	1,445
In 1918	1,169	1,341	2,510
In 1919	1,166	1,477	2,643
			6598

A total of about six thousand six hundred, for a period beginning in October, 1917, and ending August 1, 1919.

In addition to this regular correspondence, are twenty-two numbers of the Bulletins of the Bureau sent to an average of five hundred men for each number; totalling eleven thousand; dinner post cards, sent out at nine different times to the same average number, five hundred;—totalling four thousand five hundred.

This makes a grand total of all correspondence of twenty-two thousand one hundred letters, bulletins, form letters, and dinner post cards, bills rendered, etc.

The following records the types of correspondence:

a CONCERNING Registration (see below — 2.)

b. INQUIRIES: Covering widely diverse subjects.

c. PURCHASES: For purchases of varied articles.

d. REQUESTS: For various errands and commissions.

e. CASUALTIES: Information asked for, sought and received.

f. CABLES: Regarding arrivals, illness, addresses, but mostly regarding casualties.

g. INSTITUTE: Correspondence between Alumni Committee, Auxiliary, Faculty and the Bureau, including reports.

h. INTRODUCTIONS: To and from various people.

k. AMERICAN RED CROSS: Mostly regarding information on casualties, with American Red Cross Home Communication Service.

l. FORM LETTERS: Soliciting registration and welcome to Tech men abroad, advertising the Bureau.

m. BILLS RENDERED: For purchases made by bureau.

p. DINNER NOTICES: Including those for Christmas Party.

r. IDENTITY CARDS: Sent to every man in service. To be sent in in case of casualty or sickness.

s. BULLETINS: Monthly news to men abroad. Advertising Auxiliary supplies (called "Treasure Chest.")

t. THE TECH: Sent out from Bureau, up to August 1918. After that direct to men from Tech office.

v. PERSONAL: Foremost in importance. Just friendly letters to the director and by him in answer.

w. ADDRESS LISTS: New registrations and lists of address changes sent each week to Auxiliary (see 2. below.)

2. REGISTRATION:

Service records and data of each Tech man in service in American Expeditionary Forces, or Red Cross, Young Men's Christian Association or other branch abroad. Numbered some eight hundred recorded men, definitely communicated with, and others by list from Auxiliary. A bureau activity, a constant effort to keep these records up to date. Men changed addresses frequently, sometimes branch of service.

Sources of these records: Personal visits of men to Bureau, by correspondence. Also by visitors' book in the Bureau, and by the large official register of the American University Union which was in the entrance hall of the hotel. Many men registered here, failing to visit the Bureau.

The director made it an important point to get a new man to register on his first visit to the Bureau. On each successive visit he made the necessary changes in his registration. Also the director sent out form letters of welcome, including blank registration for new men in Europe to forward back to the Bureau. Men often registered other men.

3. THE ACTUAL BUREAU.

a DESCRIPTION. The first Bureau at the Royal Palace hotel (American University Union) occupied from the opening to August 1918, was located on the second floor (first floor French style) in the corner room facing the Place de Comedie

Francaise, with its fountains and trees, and always filled with sunlight. In this room the director had his desk and his secretary her files and office necessities. For this room was both an office and reception room. Mr. Gibbs' bedroom was a small room adjoining the Bureau, and bathroom completed the suite. Directly across from the Bureau door was the Union library.

The director's idea was to make the Bureau as attractive, materially, to the visitors as possible, adding to the sense of comfort his personal interest to every newcomer.

As in the other bureaus, there was an open fireplace and there were cheerful wood fires during the spring, fall and winter. These were an actual necessity during the winter as the " Chauffage Centrale " (central heating) of the hotel did not always " function " (heat) well. The Paris climate was very damp, and in addition to their actual necessity, their warm cheer added to the attractiveness of the Bureau. Little flower booths were frequent in the Paris streets, and these furnished the flowers which were always on hand in the Bureau. The quaint little Vendeuse at the end of the Pont du Caroussel was really the Tech flower " lady " and her cheery greeting and interest were known to many of the boys.

The director took ten pounds of American coffee over to France with him, which was a gift to the Auxiliary. He bought a French " Percolator " and the necessary furnishings to go with it, and started the custom of " brewing " American coffee in the Bureau in the afternoons, often too at night. This custom grew very popular. Many boys did not like tea, and did not care for French coffee, and demanded coffee regularly. After the armistice it was possible to secure French pastry in increasing degree, and this added to the cheer of these " coffee parties." American University Union officials and also many outsiders found their way in to these gatherings and most welcome they were. The supply of coffee from the Auxiliary continued, and all of it was from generous and interested givers.

Smokes were always on hand, being obtained by the boys, for the Bureau, from the quartermaster stores. Other supplies such as sugar and condensed milk came through the same source. The boys were most thoughtful and generous in this and other regards.

During the first two or three months, the director gathered Tech men in the Union dining room for luncheon and dinners. Later the boys preferred to eat elsewhere and the directors' growing knowledge of Paris enabled him to find places for them.

BUREAU ENLARGED

In August 1918, the number of visitors to the Union and to the Bureau increased very markedly.

It was found that the reception room was crowded by having it for the office, and that letters and office routine could not be conducted conveniently with visitors and conversation. The small bedroom of the director was made into the office for the secretary and the regular business of the Bureau conducted there, the director, however, retaining his desk in the reception room. This last feature was found advisable, as the boys would always congregate about the director's desk when he was at it. The director secured another bedroom adjoining his old one. This room contained two beds, and the extra bed was very much in demand by various Tech visitors who were not always able to secure accommodations in the hotel. In fact, on many occasions an extra cot was set up at night in the little office for visitors, and several times a mattress was spread upon the floor of the Bureau or reception room. Only a few rooms in the hotel had bathrooms attached, and the director's bath was very much in demand by passing visitors, on hasty trips to or through Paris. It was once remarked by Mr. Louis Crenshawe of the Virginia Bureau, who, by the way, maintained a very fine, active bureau, that we (the Union) not only "eats and sleeps 'em, but we also washes 'em."

Rooms in Paris at armistice time and later were very scarce, with an enormous demand. The directors of the bureaus and Union officials not only provided extra sleeping accommodations, but went out with visitors and searched for rooms and hotels.

The Union offered a certain amount of storage space, but the director in addition had one or two presses in which he kept bundles of all sorts left by the men.

In addition to the reading matter in the Union library, there were magazines in the Bureau, and copies of the "Tech" always on hand. There were also various guides and plans of Paris on hand.

Personal interest in each visitor was the distinctive note of the Bureau. The director fortunately for this had a good memory for names and faces, and men were always pleased to be recalled by name on their second visit. The director tried to be on the job all day, and if out, the secretary welcomed the men, and later the assistant director. As has been mentioned, no routine business was too pressing to be dropped to give a welcome to men, and for conversation, and the men showed a marked inclination to sit around and talk.

A visitors' book was always open and men registered here on successive visits, and at least once a week if coming in that frequently or oftener, and visitors here could find the addresses of their friends who were in Paris or had passed through.

BUREAU ENLARGED A SECOND TIME, MARCH, 1919

In March, Sergeant David Allen Reed, junior, of the Motor Transport Corps, came to Paris and after being demobilized at St. Aignon, became the assistant director. Reed is Technology '18, and went over with the Technology Ambulance Unit in June '17. During the whole of the war he served in the Camion or Truck service with the famous section in the French Motor Transport Corps known as the "Reserve Mallet" and figured in nearly all the active fronts. He assisted the director in a very able manner, not only in the detailed office routine, but getting hold of the same personal spirit in which the director conducted the affairs of the Bureau. He was well liked and easily a favorite with every man who visited the Bureau. The director had long needed able assistance, and goes on record as saying that Reed gave him most generous, wholehearted and efficient help.

On his arrival another bedroom was secured, adjoining that of the director. His room also served for the accommodation of visitors with the use of another folding cot.

CHANGE OF THE BUREAU FOR JULY, 1919

All the bureaus of the Union closed their work on July 1, 1919, except Technology, which continued until August, 1919. The Union relinquished its contract with the Royal Palace hotel, retaining only its offices. At the request of the Union officials, Tech moved up one flight, and occupied the old Yale Bureau. The reception room and office were directly over those of the old office, with a bath adjoining. The other room was a large room directly over the Union library. This was made by the director into a little dormitory, the director and assistant director having each a bed, and two other beds were provided for visitors. July was a busy month, and the extra month proved the value of maintaining the Bureau over that time. The

Bureau during this month was more like a Tech Club, and meals were often served in the Bureau, a plan which was not permitted by the Union by-laws before.

The Bureau officially closed on August 1, but details of closing kept the director at the Union until August 15.

PERSONNEL OF THE BUREAU

Previous to Mr. Gibbs' arrival the following men had served as directors:

V. R. Lansingh '98. He inaugurated the Tech Club of Paris in June, 1917, and was one of the founders of the American University Union, and its first assistant director and business manager to the time of his return to America in June, 1918.

Under his direction, Robert M. Allen, '16, was the assistant director of the Tech Bureau, from the fall of '17 to February, 1918. Allen was a member of the Tech Ambulance Unit, with Reed, '18. The burden of the routine business of the Bureau fell to Allen and the secretary, as Lansingh was much occupied with the Union affairs. Allen has a pleasing personality, and put in lots of energy to make a success of the Bureau. He had a wide acquaintance with Tech men and many of the boys of the Technology Ambulance Unit were made at home in the Bureau. In February, 1918, Allen entered the Ecole D'Artillerie at Fontainbleau, in company with many other Americans, among them Elwell '19, as an aspirant in the French army in preparation for a commission. He served before the armistice in the 40th Regiment of Artillery, and received a Croix de Guerre, and also won the Fouragere, permitted to that regiment. This decoration is the shoulder cord of green and yellow, noting the fact that the regiment's colors had been decorated with the Medaille Militaire.

The secretary was Miss Alice Beakhurst. Her parents are English, but she was born in Paris, but is a British subject. She spoke and wrote well both English and French. She was at first a secretary of the Union forces, but later was secretary to Mr. Lansingh, and continued to be the secretary to the Bureau, and served faithfully and efficiently, and without vacation until Mr. Gibbs' departure in August. She was pleasing to Tech men, remembering many of them personally, and made them welcome. She has two brothers who served in the American army and hopes some time to come to America.

In December, 1918, the work of the office demanded more extra help, and Mr. Gibbs engaged Miss Kitty White's services from that date until March, 1919. She assisted directly Miss Beakhurst in the details of the office work and also in the entertainment of the men.

During the whole period, and especially the time from April 18 to December 18, the director had the assistance of a Boy Scout, John Cosenor, an English boy from the Island of Jersey, who was attached to the American Red Cross in Paris.

As above noted, Mr. Reed came in March, 1919, and remained until nearly the close of the Bureau.

The whole personnel fitted together well and worked harmoniously and happily.

4. BUREAU AS A MAIL CENTER.

The Union and its bureaus acted as a mailing address for countless men in the American Expeditionary Forces. In particular, the Tech Bureau was especially convenient for this purpose, as men's military addresses were constantly changing. Mail coming to the Bureau for Tech men was either forwarded directly to the man's address as shown by his registration card or else held by his direction at the Bureau until he directed it to be forwarded or gave a new address. Mail coming for men not registered was held until they could be located or until they wrote in or visited the Bureau. The service was highly appreciated.

5. THE FINANCES OF THE BUREAU.

a. Bureau Fund.
b. Emergency Fund.

a. THE BUREAU FUND.

All of this fund was furnished through the committee of the alumni, and represented contributions and pledges by alumni at home, and from the corporation, and from individual givers. It was always adequate and always generous. The Director's discretion and judgment was always trusted and backed, and he used all funds to the advancement and benefit of the Bureau and the men. A report was sent to the committee in the form of a trial balance each month. A regular report of these finances will be printed separately in the REVIEW. Several men abroad desired to contribute to the funds of the Bureau.' In most cases the director refused to accept these gifts from American Expeditionary Force men. Several relatives of American Expeditionary Force men sent over sums as an appreciation of the interest the Bureau took in their sons or brothers. One or two older graduates gave the director money to be used to give enlisted men, especially, a little cheer when they came to Paris. Several relatives sent money in care of the director to be used for their sons should they have need.

The Bureau fund was expended as follows: Rent of rooms of Bureau, and bills incidental to same. Entertainment of the men at Bureau or in Paris; for flowers, expenses of coffee parties, magazines, extra wood fires, ice cream, drinks, meals in hotel and outside, theaters and operas. For printing of Bulletin and dinner post cards, for stationery and office supplies. Secretary's salary, and additional help for her, for Miss White, for Boy Scout. For director's expenses and salary. His expenses included all living expenses, room, meals, amusements, etc. Outside of barest living expenses, all above expenses were spent by the director either for the men, or in company with them as a companion. Travel expenses to and from America, a little travel in France, including a two-weeks vacation spent in the South of France in January, 1919.

In December the director lived at the Hotel Lutetia for about a month. He found it necessary to get away from the constant life at the Union for rest, and to take care of bookkeeping and incidental work without interruption. Also in June he shared a room with E. P. Brooks '17, at the Hotel de l'Odeon in the Latin Quarter for the same reason.

His salary was one hundred dollars per month, which he took in France at the prevailing rate of exchange.

The assistant director received five hundred francs per month, rent of room and a fund for entertainment.

Also loans of a temporary character were made to the men from this fund. There were many holidays in France, and men often arrived in Paris after banking hours, or before pay was received. All these were paid back cheerfully and gratefully. The Bureau, however, never advertised its willingness to loan. Men made request and were accommodated.

The Bureau from this fund made purchases for men outside Paris and rendered accounts to them, also received from them money on account for such commissions. Bureau funds were banked and a double entry system kept of credits and debits.

The total of all money in this fund expended was about 102,000 francs, and

FAMILIAR GLIMPSES OF THE TECH BUREAU AT PARIS

THE '98 AND '99 JOINT REUNION

taking an average exchange rate at six francs per dollar, the amount may be stated at seventeen thousand dollars.

b. THE EMERGENCY FUND.

In August, 1918, the sum of two thousand dollars was forwarded to the director from the committee by Charles W. Eaton '85, who came to Europe to go into the service of the American Red Cross. One thousand dollars represented the proceeds from the "Tech Show" of 1918. The other thousand was the generous gift of Eaton himself. This money was to be used by the director to aid Tech soldiers and officers who were wounded or ill or in other need, and also to assist men who were receiving their commissions as second lieutenants who had immediate need of money for equipment. Until the armistice the director applied these funds wherever he heard of a wounded or a sick man in a hospital. These funds were given as a long time loan.

After the armistice, the director still found a few men in hospitals to whom he gave assistance. In every case these loans were highly appreciated. Also this money was used regularly as long or short time loans to men who wrote for them or came personally. The privilege was never abused, and was of great relief to many men. No questions were asked, no strings tied to the loan, the man simply put the date and his name under an "I. O. U." to the emergency fund. And he always paid back the loan, usually without any request to do so. All this loan money was returned. The director would trust any Tech man anywhere, any time on the face of the earth.

6. TECHNOLOGY DINNERS.

The regular monthly dinners were interrupted in March, 1918, owing to the exigencies of the German offensive beginning then. By agreement all the bureaus of the Union gave up the custom temporarily.

The first dinner under the director was held in June, 1918, and was also a farewell dinner to Lansingh '98 who was leaving for America. The men present presented Lansingh with a handsome "Cave Liqueur." This was a fine mahogany case containing a crystal liqueur set of the Empire period.

These dinners were held in the Union dining room on the first Saturday of each month, with an average attendance of twenty-five men. The average price was twelve francs. The Bureau furnished the smokes and extras. There were special speakers at some of these dinners, among them Professor Erskine of Columbia University, Professor Nettleton, Director of the Union, Professor Jackson and his brother Colonel J. P. Jackson, Major Williford, United States army, Professor Riley of the Institute and several others. The boys preferred the dinners to be very informal, and a pleasant way to meet old friends and to chat.

In March, 1919, the place for the dinners was changed. These remaining dinners were held at Restaurant Procope, on Rue de l'Ancienne Comedie, in the Latin Quarter near the Boulevard St. Germain.

The price here was fifteen francs but a very good menu was provided, and the men had a large dining room to themselves.

Restaurant Procope is one of the oldest in Paris. Opposite was located before the French Revolution the old Comedie, the famous Theatre Comedie Francaise. At this restaurant gathered men whose names are famous, Rousseau, Voltaire, Robespierre and Danton. Several tables record their names. Our own Benjamin Franklin was well known here, and on his death, his bust was set up and crowned with garlands.

At these dinners there were always small orchestras.

On December 21, 1918, a Christmas party was held at the Cafe-Restaurant Cardinal, which is situated at the corner of the Rue de Richelieu and the Boulevard des Italiens. There were forty Tech men present, and some guests. An enlisted men's orchestra enlivened the occasion. Music was also provided, several singers, including a Young Men's Christian Association Quartette.

Practically the whole second floor of the restaurant was given over to Tech. There was an "open house" at 5 P.M. at which the traditional egg-nogg was served. At 7.30 P.M. a real Christmas dinner was served in a large, cheery room. Everybody enjoyed themselves. The "Treasure Chest" furnished the gifts.

The men paid about one-half the expenses of the dinner and gifts from the States the balance.

These dinners, twelve in number, brought different groups of Tech men together, and served to make a very definite impress of Tech loyalty in the heart of every man present.

7. EXPEDITIONS.

There were a great many requests from men in the field for various purchases and commissions from Paris.

Lansingh established a Purchasing Bureau in the American University Union, and the director referred many of these requests to that Bureau. But many others he preferred to do himself, and these expeditions formed a constant and important part of the work of the Bureau. The director often went shopping with the men themselves, and the secretary, Miss Beakhurst, was also in great demand to assist the men in their purchases for "people" at home.

Needless to say, the director learned a great deal about Paris shops and could pass this knowledge on.

8. THE "TREASURE CHEST."

This term has been used above in referring to the Auxiliary. The director gave this term to the supplies in the Bureau sent from the Auxiliary, in his first Bulletin.

All these goods were stored in presses and trunks near the Bureau. The director made it his constant effort to place these gifts before the men, on their visits to the Bureau, and by letter, and by a special note in the Bulletin. The "Treasure Chest" did become well known and was sought, and depleted. Knit goods came frequently by parcel-post, very few failing to arrive, the Red Cross assisting us when they were caught in the mesh of the "Duane" (Customs). Trunks were brought over by visitors from the States. The boys often unpacked these and spread abroad the news of their contents.

These goods went to others besides Tech men, to hospitals, the devastated areas, to various other relief organizations who applied. The boys were full of praise and gratitude to the women of Tech. Reports of the articles sent have already appeared in the Reports of the Auxiliary.

9. AMERICAN EXPEDITIONARY FORCE EDUCATION.

From March until June under the provisions of the United States army, men were placed in the various universities in France and England. Tech had its quota, scattered through these universities in both countries. A large number were located in Paris, at the Sorbonne, Ecole Politechnique des Ponts et Chausseus, and at the art training centre at Bellevue. Many were instructors at the American Expeditionary Force University at Beaune.

The students in Paris made the Bureau a regular center, and each afternoon it was filled with men chatting away over the coffee and "patisserie."

The boys enjoyed going out to luncheon and dinner in groups. The Director and assistant always went along, and were always wanted. There were often theatre parties and parties to the Opera and Opera Comique. There were little trips to the various museums and occasional trips to the cathedrals and to the chateaux.

10. The Directory.

The director really became a directory. On reaching Paris he immediately commenced lessons in French and made real progress. He also learned the city, its places of interest, its shops, its restaurants and amusements. He made himself particularly acquainted with the spots representing old Paris. In this way he found his knowledge in demand, and, as time went on, himself. He was pleased to realize that the boys not only wanted his knowledge and his help, but when they came they wanted "George" himself. So the director was directory, counsellor, friend and companion. He was always interested in individuals and in individuality. This work is the best and the happiest he has ever done. Few men are blessed with so many friends.

11. Hospitals.

When men were ill, or wounded, and were within the district of Paris, the director went to see them and assisted them wherever he could.

For several months during 1918, he was a regular visitor two afternoons each week at Base Hospital No. 1, American Red Cross at Neuilly, Paris.

12. Permanent Roots.

On July 31, at the Bureau the director gathered all the men who were in Paris, more or less permanently, and organized the Technology Club of Paris. Mr. Edward Stuart '10 is the secretary. He is permanently located in Paris with the Rockefeller Foundation. For the present, it is planned to have luncheons at regular intervals in Paris. Stuart will have the mailing list of all men in and about Paris and France, and will communicate all Tech and alumni matters to them. Men visiting Paris and France can communicate through him with others and his office will record new arrivals. It is hoped that a regular organization will soon grow up, and if many men return to France, a permanent club with quarters may result.

If any Tech man goes to France, see Stuart and register. His address: Mr. Edward Stuart, care of Rockefeller Foundation, 12 Rue Boissy d'Anglas, Paris, France.

13. Visitors From Home.

There were several alumni visiting France on various missions who reached the Bureau. Among them were Charles W. Eaton '85, who endeared himself to every man who met him. He enjoyed the sociability of the Bureau and was most generous in his hospitality. At Christmas, 1918, an attractive "briquet" (French metal cigarette lighter) was sent out to seven hundred Tech men as a gift. These were the generous gift of Mr. Eaton.

Mr. Alfred F. Bemis '93 was another visitor who took a great deal of interest in the Bureau. The director arranged a luncheon for Mr. Bemis with several prominent French engineers present.

Other visitors were George F. Swain, '77, Charles T. Main '76, George L. Gilmore '90 and several others.

CONCLUSION,

The man in the American Expeditionary Forces, a long way from home, appreciated any personal interest taken in him and his comfort.

Paris is a marvelous, lovely city, offering interest of all kinds, wholesome and unwholesome. If wholesome interests failed, the man might take the unwholesome.

The American University Union provided a normal, wholesome, familiar American college atmosphere. It offered hotel and club accommodations, and it helped men out in their various needs. The men that found it, and many thousands did find it, fell into more or less normal familiar ways. Here they met many friends and acquaintances. They felt at home there and they were not obviously "welfared" or "rescued."

The Technology Bureau was a part of this atmosphere, and was a home and club, for our "overseas boys." They liked it, they used it and they claimed it for their own. Once visited, a man always came back. The director gave them the freedom of the place, made no rules, never gave unasked-for advice and if they mentioned a want within reason, tried to fill it.

The men realized also that the Bureau stood for Technology. It was Technology behind them wherever they were. They knew they had an Alma Mater and they were proud of it.

GEORGE CROCKER GIBBS, '00,
Director.

October 20, 1919.

ANENT OUR "MR. SMITH"

APROPOS of the latest $4,000,000 gift of our munificent "Mr. Smith," who still remains shrouded in mystery, the Boston "Post" in the morning edition of August 23 comments editorially as follows:

"'Mr. Smith' Again

When the Institute of Technology stands in especial need of money for one purpose or another, she has only to call upon the really existent but preternaturally shrinking 'Mr. Smith,' and the thing is already nearly done. So with the projected $19,000,000 that the institution wants as a total for its new endowment fund. Mr. Smith arises to remark—invisibly and inaudibly however—that he will turn in $4,000,000 of that sum if other people will donate an equal amount on or before the beginning of the new year.

Harvard has just set out to raise a fund of approximately the same generous proportions. After a while and from many sources she will get it, of course. But lucky 'Tech' merely taps 'Mr. Smith,' and the stream of money comes forth at once. Smiths are very numerous in the world, but this particular kind of Smith is as rare as he is helpful to the great school across the Charles. May his tribe increase."

GEORGE CROCKER GIBBS, '00

A short sketch of the well beloved head of the Tech Bureau in Paris

George C. Gibbs was born in New Bedford, Massachusetts, on December 16, 1878. He still calls that his home, where his mother, Mrs. Jennie W. Gibbs, and his two nieces, the Misses Van Buskirk, live at 31 Lincoln Street. Education began in a small private school, continued in public schools of New Bedford until third year of high school, when he went again to a private day school to fit especially for the Massachusetts Institute of Technology.

Gibbs entered Massachusetts Institute of Technology as a Freshman in the fall of 1896 in the Class of 1900, as a member of Course I. According to his own estimate, he may be classed as an average student, being graduated with the degree of S. B. Mr. Gibbs remembers very well the fine presence of President (General) Francis Amasa Walker, under whose able leadership and direction Massachusetts Institute of Technology was then taking its place as the foremost engineering institution of engineering in the country. President Walker's idea for the student body, then, was that Tech was a "place for men to work and not for boys to play," thereby stamping the institution with a seriousness of purpose and atmosphere of conscientious study which has continued. He did not believe in the dormitory system—students were to soon knock up against the realities of life and should live in the city, somewhat as they would when thrown out in the world. This again has in a measure contributed to the serious purpose of study, but undergraduate life and its ideals since then have shown their necessity as an integral part of education, and today undergraduate life and its ideals have contributed a great deal to the ever growing popularity and value of Tech as an institution of learning.

It was during Mr. Gibbs' freshman year that Tech suffered the loss by death of its splendid president, General Walker. A memorial service was held at Trinity Church, Boston, at which all the student body was present. The memorial sermon was preached by the late Dean Hodges, of the Episcopal Theological School of Cambridge, Mass., under whom Mr. Gibbs was to study for Holy Orders later.

The late Professor Crafts of the Department of Chemistry became Acting President and signed Gibbs' degree. It was at this commencement that Mr. Pritchett was elected president.

Gibbs figured very little in the undergraduate life while at Tech. He was a member and an officer in the Civil Engineering Society; in athletics only in the Hare and Hounds Cross Country Runs; and acted in a Walker Club Play, "The Magistrate" by Pinero. The "Cane Rushes" were in vogue in his time in old "South Field" (the National League Grounds). These were very stirring features of the struggle for supremacy between the Freshmen and Sophomores.

Undergraduate athletics, as an Institute affair, were beginning to take real shape under the active leadership of V. R. Lansingh '98, who in June, 1917, started the Tech Club of Paris, and became one of the founders and later business manager of the American University Union in Paris, and the first director of the Technology Bureau in that organization. Every one is now familiar with the good work he did there for Massachusetts Institute of Technology.

After graduation, Gibbs was a draughtsman in the Brown Hoisting Machinery Company of Cleveland, Ohio, coming back to New England from there in 1901 after a long illness of typhoid fever. Until 1908 he was engaged in highway engineering with the United States Engineer Offices at Newport, R. I., and in concrete construction in Boston.

The question has often been asked him, why should a civil engineer, graduated from Massachusetts Institute of Technology, become a clergyman? A natural question, but not an unusual occurrence. A man's real vocation is not always revealed during his college education and activities. He doesn't always "find himself." There will be found in the register of graduates a number of other like instances. Gibbs found that his chief vocation in life was "service" of some sort, more to humanity in general than to humanity through the practical sciences. That decided, he entered the Episcopal Theological School in Cambridge in 1908 to study for Holy Orders in the Episcopal Church.

During that period he was one of five others of the Class of 1900 to conduct the affairs of the Class of 1900 in place of the usual class secretary. The others of this group were Ziegler, Bowditch, Neall and Hurd. He attended all of the activities of the second big reunion, that of 1908. He was graduated with the degree of Bachelor of Divinity in 1911, and ordained at St. Paul's Cathedral, Boston, to the Diaconate by Bishop Lawrence of Massachusetts in June of that year. He was ordained to the priesthood in Tulsa, Oklahoma, by Bishop Thurston in December, 1911, and in that missionary field of the church, spent nearly the entire time of his ministry, resigning in November, 1917, as rector of the Church of the Redeemer, Okmulgee, which parish, beginning as a very small mission station he had built up, and equipped, and whose first rector he had become.

In July, 1917, he was asked by Major Jonah, chief engineer of the Frisco railroad and at the request of Colonel Townsend, United States engineer officer, at St. Louis, Missouri, to become chaplain of an engineer regiment, then recruiting. This request was refused by Washington, on the ground that the chaplaincies, at that time, were bestowed pro-rata among all religious bodies, and that the quota from the Episcopal Church was then filled. In the hope that some opportunity might offer itself or be found to serve in the war, Gibbs resigned his parish in the West, came East and took a temporary place, as curate or assistant minister at St. Ann's Church in the Bronx, New York City. He immediately became a resident member of the Tech Club of New York, and through this means met Mr. Coburn '98, better known to all Tech men as "Pa Coburn." When Mr. Coburn found to his great regret that he could not go "overseas" as director of the Tech Bureau of Paris, he asked Gibbs and met an instant affirmative. This was early in February, 1918. After a visit to Boston and meeting the committee he was asked to be the director in Paris. He sailed on the steamer "Chicago" of the French line, arriving in Paris via Bordeaux on March 19, 1919. His welcome was signalized by the salvo from the big German "Bertha" shelling Paris. But neither that unpleasantness, nor anything else interfered with his "carrying on" the work of the Technology Bureau, following in the footsteps of V. R. Lansingh '98 or R. M. Allen '16, for as the French say "ce ne fait rien." Gibbs was pleased to serve Tech, and he put into his work the best he had to give: himself. If he didn't wear a United States uniform (his keenest regret) he hopes that he did a bit for his country as well as Massachusetts Institute of Technology. Every one owes a debt to his Alma Mater—and so to Massachusetts Institute of Technology. Gibbs hasn't got through paying his—and he wants to know—how about everybody else?

ARTHUR F. ESTABROOK

Member of corporation and generous benefactor to the Institute dies — his gift to Technology

ARTHUR F. ESTABROOK, prominent among Boston bankers as the senior member of the firm of Estabrook & Co., and a life member of the Corporation of Technology, died on Sunday, July 27, in Porto Rico, at the age of seventy-two years.

Mr. Estabrook was born in Boston on May 17, 1847, the son of James A. and Louisa (Hill) Estabrook. He received his education in the schools in Belmont and later entered the banking business in Boston, first with the firm of Brewster, Sweet & Co., later going to Brewster, Bassett & Co., in 1874, of which he was a member. This house, in turn, became, in 1883, that of Brewster, Cobb & Estabrook, with which he continued until February 1, 1896, when he became senior member of the firm of Estabrook & Co., which then began business, opening two years later New York offices in addition to their Boston offices. Mr. Estabrook was a member of the Boston and New York and Philadelphia stock exchanges. In banking and financial circles, he had been well known and he was considered an authority on matters of finance.

He had various other interests, aside from his banking business. One of these was his love for flowers, shrubbery and trees, and his summer estate, "Barberry Lodge," on Atlantic Avenue in the Phillips Beach section of Swampscott, was an expression of his interest in floriculture, as his grounds and greenhouses were notable for the rare plants cultivated there. It was in this respect one of the show places on the North Shore, and had been the meeting place, on occasion, of the Massachusetts Horticultural Society, of which Mr. Estabrook had been a trustee and also its president.

In other capacities he had served as a member of the Corporation of the Institute, and Technology's flags were lowered to half-mast at the news of his death. Mr. Estabrook was also vice-president of the Real Estate Exchange and Auction Board, first vice-president of the New England Conservatory of Music, trustee of Clark University in Worcester; also trustee of the Brewster Free Academy at Wolfeboro, N. H., trustee of the Massachusetts General Theological Society and of the Museum of Fine Arts, and treasurer of the Homeopathic Hospital.

He was a member of the American Academy of Political and Social Science, a life member of the Metropolitan Museum of Art in New York and member of the American Museum of Natural History, New York. He belonged to the Union Club, Boston City Club, Algonquin Club, Art Club, and Exchange Club, and the Merchants Club, of which he had been treasurer, of Boston; the Tedesco Country Club, Swampscott; the Eastern Yacht Club at Marblehead Neck; the Colonial Club in Cambridge; the Country Club, Brookline, and Oakley Club in Belmont. He was a Republican in his politics and a Unitarian in his church interests. On October 8, 1874, Mr. Estabrook married, in Belmont, Ida A. Fletcher. His wife survives him.

Mr. Estabrook's will, among charitable bequests, amounting to nearly a million dollars, leaves $100,000 to the Institute.

On hearing of Mr. Estabrook's death, Sylvester Baxter, the well-known Boston publicist, wrote the following appreciation for the Boston "Herald":

"It will not be easy to fill the vacancy in Boston's public life made by the death of Arthur F. Estabrook. He was one of the best known of public-spirited citizens; although not conspicuous in the public eye, he was esteemed and loved by the hundreds of co-workers with whom his many activities—civic, patriotic, educational, philanthropic and social—brought him into intimate relationships. His hearty good will, his generosity, his dry humor and his enthusiasm for whatever good work he became interested in made friends for him on all sides. His sound counsels as a business man of exceptional competence were of great service to the various educational and quasi-public institutions with which he was prominently connected. In particular, the future of the Massachusetts Institute of Technology has largely been shaped by his connection with it as member of the corporation. As a Boston citizen his participation in municipal affairs had marked results particularly as to recent events. It is only to a comparatively few that the importance of his connection with the last mayoralty election is known. For it was in his office that the conduct of the campaign that resulted in the overthrow of Curleyism and the election of Mayor Peters was planned, and carried through largely by his advice and assistance. And before his departure for his winter home in Porto Rico he had the satisfaction of witnessing the successful fruition of his work. Regularly, for many years past, on the Saturday after Christmas he would sail for his two months' stay on his estate of several hundred acres near San Juan, where he delighted in exercising his uncommon genius for hospitality. It was my pleasant fortune to meet Mr. Estabrook when I first visited Porto Rico three winters ago and to see much of him there the two succeeding years. The tropics had saved his life, he said. He was in a desperate condition when he went to Samoa and lived for some months at Vailima, so long the home of Robert Louis Stevenson. After that he resorted to Porto Rico every winter, finding health in its benign and equable climate of ideal summer. Last September he had a severe attack of influenza. This undermined his physique; but going a month earlier, he soon became his old self and entertained many friends, including Thomas Allen, J. Templeman Coolidge and A. W. Longfellow of the Boston Art Commission, who spent a delightful week with him at Casa Ysabel. Mr. Estabrook was long a member of the Art Commission, and he had at last realized his desire to make his former associates acquainted with the artistic charms of his beloved island. He passed no happier winter there than that which proved to be his last. He was greatly interested in the welfare of Porto Rico and had abiding confidence in its future under the Stars and Stripes.

SYLVESTER BAXTER."

WALKER GALLERIES ARE OPENED

AMONG the many new and useful innovations constantly being opened to the Institute students, it is interesting to note that the galleries of the main dining hall of the Walker Memorial, so long standing idle, have at last been opened to general student use. Numerous writing desks, chairs, and luxuriously upholstered divans arrived, and the work of putting the place in perfect condition has been steadily pushed forward, so that the galleries could be opened when the rest of the building was put into use. It is expected that the use of the collections of books in the second floor reading rooms will be extended to the newly opened galleries.

CHARLES FRANCIS ADAMS CURRIER

Former head of the Department of History dies after breakdown and long illness

Professor Charles Francis Adams Currier, aged fifty-seven years, professor of history until recently at Massachusetts Institute of Technology for thirty years, an authority on American and European history, Constitutional law and municipal and town governments, died on September 6, at his home, Winchester, Mass.

Professor Currier had been a sufferer from mental illness for several years and had recently been under treatment at a sanitarium. The protracted mental infirmity caused his mind to give way and produced a state of despondency. He had resigned his position at the Institute early in 1917, as a result of a complete breakdown.

Professor Currier was born in East Kingston, Mass., March 17, 1862. As a boy on his father's farm he sustained an injury to one of his legs, by falling from a hayrack onto a pitchfork. This accident necessitated the amputation of the leg ten years ago. Entering Phillips Exeter Academy at Exeter, N. H., he was graduated at the head of his class in 1883. He was graduated from Harvard in the class of 1887 with the degree of A.B., taking a degree of A.M., after studying for two years in the Harvard Graduate School. He was sent to Europe on a Harvard fellowship to study for a year at the University of Berlin and for a year at Paris. He made a special study of history and of the Constitutional law and municipal government of those countries.

On his return to the United States he became professor of United States and recent European history and government at Technology, giving two courses in those subjects for many years to large classes of students. He also gave a number of lecture courses on political science, notably during the later years of his professorship on Constitutional and International law and municipal government.

Professor Currier wrote many articles for magazines. Notable among these were his contributions on the Single Land Tax question in opposition to the views of Professor Lewis J. Johnson of Harvard University, who favored the Single Land Tax. This controversy attracted considerable attention about a decade ago in educational and economic circles.

Professor Currier was a member of the American Academy of Political Science and also of a number of historical and kindred organizations.

Serving for ten years on the School Committee of Winchester, being chairman of that body for many years, he also was a member of the committee which built the present handsome Winchester High School building. He took an active part in town affairs, particularly at town meetings. His large grasp of facts and his special knowledge of municipal and town governmental principles gained for him the widespread respect of his fellow citizens.

He was one of the men who helped to defeat the plan to establish the so-called town manager form of government which was proposed for the town of Winchester a few years ago. He wrote and spoke very vigorously in favor of the old town meeting idea and won his point.

Professor Currier was married to Miss Florence M. Morton of Somerville in 1892. She, with a son, Francis Currier of Cambridge, an instructor at Technology, and a teacher at the Harvard Summer School, survive. During the war his son served with the personnel force of the United States Intelligence Service.

THE ROLL OF HONOR OF TECHNOLOGY DEAD

Additions from May 23, 1919, to October 17, 1919.

Albee, Orton W., '93. Lieutenant-Colonel Ordnance Department. Died at Marlboro, Mass., August 4, 1919.

Busey, Charles B., '12. 2d Lieutenant, Infantry. Killed in action in the Argonne Forest, November 1, 1918.

Catton, Richard B., '15. 2d Lieutenant, Air Service, Signal Corps. Died at Base Hospital, Savenay, France, after six months' illness, April 14, 1919.

Haslam, R. H., '17. 2d Lieutenant, Air Service, Aeronautics. Killed near Kelly Field, Texas, August 22, 1919.

Kennard, Irving, '19. Candidate, Air Service Aeronautics. Killed in accident in the air, Arcadia, Cal., February 20, 1919.

Mackay, Robert A., '18. 2d Lieutenant, Infantry. Killed in action, September 29, 1918.

Peltier, Paul D., '19. 2d Lieutenant, Sanitary Corps, discharged. Died from results of an accident in Asia Minor, at Eshi-Sheheir, April 1, 1919.

Plummer, Thomas R., '88. 1st Lieutenant, American Red Cross. Died at Raon l'Etape, France, November 24, 1918.

Roper, Kenyon, '18. Captain, Coast Artillery Corps, Aerial Observer. Killed in aerial combat, September 14, 1918.

Van Eectwelde, R., '09. Belgian Army. Died in Military Hospital, La Parne, Belgium, August 15, 1918, of influenza, contracted in the trenches.

Williams, Carl M., '07. American Red Cross, Dijon, France. Died in Officers' Hospital, Paris, January 23, 1919, of influenza-pneumonia.

Williams, Ralph G., '15 and '16. Naval Aviation School, Massachusetts Institute of Technology. Died at the Chelsea Naval Hospital, January 30, 1918.

Cavanagh, H. E. C., '12. Lieutenant, Canadian Engineers. Died of wounds, September 4, 1916.

Hartman, Fred S., '15. Lieutenant, Air Service Aeronautics. Killed in Toul, France, aerodrome accident, April 7, 1919.

(Compiled by Technology War Record Committee)

CITED FOR BRAVERY

Additions to cited list from May 23, 1919, to October 17, 1919.

Adams, Burton A., '98. Major, Army Citation from Commander-in-Chief, A. E. F., June 26, 1919.

Adams, H. H., '99. Colonel, Officer of the Legion of Honor.

Adams, Herbert W., '99. Lieutenant-Colonel, Distinguished Service Medal.

Aldrich, Ellwood H., '19. 2d Lieutenant, Divisional Citation, French Army; Croix de Guerre and American Field Service Medal.

Aldrich, W. T., '01. Chevalier of the Legion of Honor.

Atherton, Thomas H., Jr., '09. Captain, Citation, G. O. 29, Headquarters 28th Division, A. E. F., November 26, 1918; French Citation Army Orders; Belgian War Cross and the Croix de Guerre.

Aultman, Dwight E., '95. Brigadier-General, Distinguished Service Medal.

Baker, Douglas B., '15. Captain, Croix de Guerre with palm; Army Citation No. 1, 1919.

Barker, J. W., '16. Major, Order of Danielo I.

Barrett, H. W., '19. 2d Lieutenant, Distinguished Service Cross.

Batchelder, R. J., '08. Lieutenant, Italian Service Decoration.

Batschy, John M., '17. Captain, Individual Citation.

Baum, G. L., '19. Croix de Guerre.

Benton, Carroll R., '10. Sergeant, Citation.

Bouknight, William M., '18-'19. 1st Lieutenant, Citation, General Headquarters, April 19, 1919.

Burrage, Severance, '92. Major, Royal Red Cross of Serbia and the Order of San Saba.

Campbell, Jeremiah, '91. Major, Merite Agricole from the French Government.

Chandler, A. D., Jr., '14. 1st Lieutenant, Regimental Citation.

Chace, Mason S., '94. Civilian, Legion of Honor.

Chase, Aurin M., '00. Lieutenant-Colonel, Certificate of Merit from the Commander-in-Chief of the A. E. F.

Cohen, Samson K., '10. 1st Lieutenant, Company Citation.

Coleman, C. A., '16. Captain, Officer of the French Academy.

Cross, George I., '01. Captain, Cited for Croix de Guerre; two Divisional Citations.

Cunningham, K. M., '19. 1st Lieutenant, Squadron cited three times by the French and twice by the English.

Desloge, Joseph, '12. Sous-Lieutenant, Croix de Guerre.

Dexter, H. E., '12. Captain, Citation for Meritorious Service.

Dickinson, D., Jr., '08. Captain, Citation in G. O. 88, 2d Division.

Douglas, Lewis W., '17. 1st Lieutenant, Belgian War Cross and cited by General Pershing.

Drew, C. D., '99. Major, cited by General Pershing; Military Cross (British).

Fallon, N., '06. Lieutenant-Commander, Citation from Royal Navy and from United States Navy (Admiral Sims).

Feland, Logan, '92. Brigadier-General, Distinguished Service Cross.; Distinguished Service Medal.; Croix de Guerre with bronze and gold star and with palm.

Felton, Samuel M., '73. Civilian, Distinguished Service Medal., not Distinguished Service Cross.; Commander of the Legion of Honor.

Flannagan, Coke, '16. Captain, Citation from General Pershing and Croix de Guerre.

Fox, Charles E., '14. 1st Lieutenant, two decorations from the Serbian Government.

Gardner, F. Q. C., '13. Colonel, Distinguished Service Medal.

Gardner, J. P., '17. Captain, Croix de Guerre with palm.

Gilbert, Cass, '80. Civilian, Legion of Honor.

Glann, C. B., '16. 1st Lieutenant, Divisional Citation.

Gray, William A., Jr., '18. 1st Lieutenant, cited for bravery in action.

Greene, H. C., '97. Major, Medaille de la Reconnaissance Francaise; Croix de Guerre; Gold Medal of the " Femmes de France " (French Red Cross); Silver Cross of the Societe de Secours aux Blesses Militaires.

Guilbert, H. M., '18. Captain, Croix de Guerre with palm.

Guppy, Joseph S., '19. 1st Lieutenant, Croix de Guerre with gold star.

Hall, Herbert W., '12. Captain, Distinguished Service Cross.

Hatten, Earl R., '18. Ensign, Commended by Admiral Sims and mentioned in Admiralty (British) Despatches.

Hibbard, L. C., '17. 1st Lieutenant, Croix de Guerre.

Hunneman, J. R., '16. 1st Lieutenant, cited for work at the Marne.

Jemmett, D. M. Lieutenant, Distinguished Conduct Medal (British).

Jones, Harold W., '98. Lieutenant-Colonel, Cross of the Legion of Honor.

Keesler, E. Y., '17. Captain, Order of Leopold (Belgian).

Kenney, George C., '11. 1st Lieutenant, Distinguished Service Cross.

McDill, B. M., '18. Captain, Individual Citation.

McLaughlin, Thomas S., '16. Recommended for Certificate of Merit.

MacLeod, N. D., '14. Major, Croix de Guerre with palm.

Main, Theodore, '16. Sergeant, Recommended for Croix de Guerre.

Malmfeldt, Carl, '17. Private, Divisional Citation.

Marshall, H. F., '19. Commander, Citation by Air Commander, 1st Army.

Mason, Austin B., '10. 1st Lieutenant, Croix de Guerre (two Citations).

Maury, D. H., Jr., '23. 2d Lieutenant, Croix de Guerre.

Maxfield, Louis H., '06. Commander, Legion of Honor and Medaille de Saufetage de la Marine Francaise.

Moore, R. L., '21. 1st Lieutenant, Croix de Guerre with palm.

Norton, G. R., '07. Lieutenant-Colonel, Citation.

Parsons, F. E., '15. Private, cited by Marshal Petain, December 22, 1918; cited in orders of General commanding 18th Division, French Army; in orders of General commanding 7th, French Army.

Pettee, A. D., '16. Master Engineer, cited for service in Flash and Sound Ranging.

Plumb, Ralph, '01. Major, Distinguished Service Medal.

Plummer, Thomas R., '88. 1st Lieutenant, American Red Cross, died November 24, 1918. Croix de Guerre.

Poland, W. B., '90. Chevalier and later Commander of the Legion of Honor.

Ranney, B. M., '19. Citation in Army Orders to the 5th Army.

Rapalje, H. A., '08. Captain, Divisional Citation.

Scannell, Robert H., '17. 1st Lieutenant, Croix de Guerre.

Snow, F. W., '98. Lieutenant-Colonel, Citation.

STAUB, JOHN F., '15. Lieutenant, j. g., Letter of Commendation from the British Admiralty for successful bombing attack on enemy submarine in the North Sea, July 19, 1918.

STEBBINS, R. W., '99. Private, Squad cited in French Army Orders.

STEIN, ARTHUR L., '10. Sergeant, Croix de Guerre with palm.

STRITZINGER, F. C., JR., '92. Colonel, Citation, G. O. 46, Headquarters 6th Division, A. E. F.

STUART, E., '10. Major, Medal of Commander of San Saba (Serbian); Serbian Red Cross Medal, and recommended for Distinguished Service Medal (Red Cross).

STUART, K., '19. Ensign, Italian War Cross and Croix de Guerre with silver star.

STUBBS, A. R., '15. 2d Lieutenant, recommended for Distinguished Service Cross.

SUTHERLAND, G., '16. 1st Lieutenant, cited for Distinguished Service Medal (not received).

TALLANT, ALICE W., '98. (1st Lieutenant), Croix de Guerre.

THURBER, FRED B., '06. Lieutenant, Citation September 25, 1917, for assistance rendered after the stranding of the U. S. S. "Texas."

TOURTELLOTTE, N. E., '17. Captain, Departmental Citation.

WALCOTT, WILLIAM W., '01. Captain, died in France March 16, 1919. Recommended for the Croix de Guerre.

WALLIS, J. E., JR., '17. Captain, cited in General Headquarters Orders, A. E. F., June 3, 1919.

WIGGIN, THOMAS H., '95. Lieutenant-Colonel, cited by General Pershing.

(Compiled by Technology War Record Committee)

"CHEMICAL AGE" JOINS CAMPAIGN

NOT only are the local daily newspapers and those of the entire country making note of the movement of President Maclaurin and his strong committee to secure the new ten million dollar endowment for the Institute, but the technical press is beginning to take notice. Following is a letter received by Dr. Maclaurin from the editor of the 'Chemical Age,' which is splendid testimony of how the Institute is regarded outside its walls.

"Dear Dr. Maclaurin:

I note in today's press the Tech drive for ten million. I volunteer my personal services and the instrumentality of the 'Chemical Age' in the chemical and allied industries wherein Tech men are pre-eminent in contributions to their development.

I shall be pleased to make editorial mention of this endowment campaign; to supplement which I want your own photograph and the photograph of the Technology plant. This illustrative matter would accompany a statement of five hundred to fifteen hundred words, preferably by yourself, of the notable service of the Institute to industry and of the obligation of industry under present economic conditions to reciprocate.

Sincerely yours,
(Signed) LLOYD LAMBOURNE,
Course V, '96,
Editor, Chemical Age."

UNDERGRADUATE ACTIVITIES

William B. Barrow, Jr.

"We are happy, Tech is"— well, three thousand and fifty students ought to be a large enough enrollment to make any alumnus happy! Such a mob in the halls, and such a "bread line" in the Memorial, have never been seen. Even the Smoker had to be run off in relays on account of the large attendance. While some enjoyed the feast and good smokes, others were entertained with speeches by activity representatives and Faculty members, and still others watched the movies furnished for the occasion. Nevertheless, in spite of the congestion, everybody voted it the best ever, and especially the Freshmen. They were delighted with their first contact with Technology "spirit" and good fellowship, opening up an entirely new field of activity and endeavor as it did. Technology began to mean something more to them than simply a storehouse of study. Calls were issued by all the Student Organizations, enlisting their interest and energy, and describing the variety of opportunities open to them for their attention. It is safe to say that not one of the numerous activities of the Institute will suffer this year from lack of material. There is enough to go around, and plenty left over. We may watch for the greatest year in Student Activity that has ever been seen.

The record enrollment this Fall can only be approached by the proportionately enormous enrollment in the Summer School. Nearly twelve hundred registered for the courses offered at Cambridge, besides an even hundred that attended the camp at East Machias, Maine. There was such a bountiful supply of hot weather, and such an intensive course of study carried on, that there was not much opportunity for student activities. Students, as well as Instructors, were ready to go home and relax when the day's program was done, without filling their eyes with dust and their clothes with sweat in some athletic contest. But there were activities — it wouldn't be the 'Stute if there weren't — and those we gladly chronicle.

At a meeting of the Advisory Council for Athletics, the following T's were awarded:

For his general interest in athletics: H. J. Daube.

For breaking the hammer-throw record: C. G. Dandrow.

For N. E. I. C. L. T. A., singles only: M. Broockmann and W. Barron.

For exceptional track work: G. Bawden and W. N. Murray.

At the same time tTt's were given to: M. Broockmann, W. Barron, W. McWane, T. N. West, and L. E. Boyden.

For their work on the Rifle Team, r-T-t's were awarded to R. N. Skinner and A. L. Silver. R. N. Skinner has been elected to next year's captaincy.

Of international interest is the fact that Sindey Biddell, '22, received several honors in Paris for his swimming during the Inter-Allied Games held at the Pershing Stadium. After his return to America, Biddell and Untersee, '19, took places in the New England Athletic Association championship events.

Judging from the fact that several black eyes and bandaged heads appeared during the Summer, it may be said that the class in boxing organized by Coach Boutillier was quite a success. Some twenty-five enrolled, and — "a good time was had by all."

The Technology Christian Association planned and executed an excellent campaign to secure rooms for the extraordinary influx of students. Over a thousand rooms were located, and a newly arrived student did not have to go long without a roof over his head. Besides this credit is due the " Bible " committee for the way in which they handled the emergency demand for the Freshman handbooks. The committee members were; E. W. Davis, '21, E. W. Olcott, '21, C. W. Manville, '22, H. P. Baldwin, '21, D. N. Shaw, '22, R. H. Winde, '22, G. P. Schumacher, '22, W. C. Morse, '22. The Technology Christian Association is planning a complete student roll, showing for each student the history of his activities, both in prep school and at Technology. The value of such a roll goes without saying.

The class of 1919 has graduated two hundred fifty-seven members. Of these two hundred forty have received the degree of B. S., while fifteen attained the rank of M. S. Two acquired the degree of Doctor of Engineering. C. C. Stewart, '19, has been chosen as one of ten American students to utilize exchange scholarships with Sweden. He is going to take up graduate work in chemical engineering.

As usual, by far the largest activity of the summer centered around the camp at East Machias. Inclement weather dampened the spirits of the campers for the first few days, but two days of good hot sunshine the latter part of the first week dried them out in good shape and put their enthusiasm to working full force. A student council was elected with Homer V. Howes '20, as chairman and R. H. Smithwick '20, as secretary and treasurer. The following standing committees were elected as well. House Committee: C. H. Knight, Chairman, L. W. Moss, and F. J. Curtin. Sports Committee: E. F. Delaney, Chairman, F. J. MacDonald, and R. W. Johnson. Dining room Committee: A. W. Skilling, Chairman, C. A. Stone, and W. T. Adams. Entertainment Committee: A. F. Rogers, Chairman, H. J. Junod, and T. P. Spitz. Librarian: R. Lee. The Entertainment Committee jumped right into the middle of things with arrangements for dances and tryouts for the minstrel show held during the week. The Civil Engineers and Miners played a championship series in baseball in which the Civil Engineers came out on top, winning the first two games.

An election held the second week resulted in choosing the following managerial staff for the minstrel show:

General Manager, A. F. Rogers, '21.
Associate Manager, Herbert C. DeStaebler '21.
Business Manager, R. H. Smithwick, '21.
Publicity Manager, A. W. Skilling, '21

The end men were: H. C. DeStaebler '21, R. W. Johnson, '21, H. C. Barker, '21 and J. L. Vaupel, '21. The camp steward, Richard Shaw, acted as interlocutor. The show itself, as all such performances are bound to be, was a roaring success. A memorial tablet will be presented to the camp from the proceeds, commemorating those ex-campers who fell in the war.

In the annual field day held at camp, T. P. Spitz and H. P. Junod captured the privilege of having their names engraved on the Field Day loving cup. Spitz won three firsts, a second and third, while Junod took one first, four seconds, and a third. The meet was in charge of the athletic committee and was held on Labor Day.

A great deal of interest has been shown by the undergraduate body in the endowment campaign which is being held to raise six million dollars in order to meet the generous gift of " Mr. Smith " for four million additional. There is nothing but confidence in the student body that the ultimate amount will be reached, and they are determined that the conditions of " Mr. Smith's " offer shall not fail to mature.

DEGREES AWARDED IN JUNE

Remnants of the class of 1919 receive their diplomas

By the award of forty more degrees, the class of 1919 has at last been entirely graduated. Of this number, one received the degree of Ph.D., fourteen, the degree of M.S. and twenty-five, the degree of B.S.

The class totaled two hundred and fifty-seven students, most of whom received their diplomas last October and a few in small groups since that time. Out of the two hundred and forty students receiving the degree of B.S., one hundred and seventy-two graduated in October, forty-five since then and twenty-five now. The discrepancy is due to the fact that two men received degrees in two departments each. The list of the most recent graduates is the following:

Ph. D.—Franklin L. Hunt, B. S., M. I. T., 1909; M. A. Harvard, 1913.

M. S. in Civil Engineering,—Victor Timothy, George Halkiopolus, Cho Pin Hsueh, Chen Tan.

In Mechanical Engineering—Yoshihiki Mito.

In Electrical Engineering—Uhachi Nabeshima, Edith Clark, Timothy Edward Shea.

In Chemistry—Anthony M. Contieri, Leighton B. Smith, Earl P. Stevenson.

In Electro-Chemical Engineering—Max Knoebel.

In Aeronautical Engineering—Israel Maizlish.

B. S. in Civil Engineering—Harry J. Coyne, Harold V. L. Kaler, Howard H. McClintic, Jr., Harold M. Putnam, Walter H. Robertson.

In Mechanical Engineering—George B. Hutchings, Jr., Robert B. Swain, Wee Kua Lee.

In Mining Engineering and Metallurgy—George G. Fleming.

In Architecture—Pierre Blouke, George D. Bradley, Julius A. Buerkin, Walter S. Frazier, Jr., Franklin L. Kline, David C. Sanford, Jr., Miss B. Lemp.

In Electrical Engineering—James C. Fisher, Jesse Stam, Henry R. Whiton.

In Chemical Engineering—Percy W. Carr, Harold J. Daube, Ernest F. Perkins, Harold C. Weber.

In Naval Architecture—Leo S. Blodgett.

In Engineering Administration—Wingate Rollins.

POLAND, '90, JOINS ARMENIA MISSION

W. B. Poland, '90, who has been the Director for Europe for the Commission for Relief in Belgium and Northern France and who was given the Cross of the Legion of Honor by the French Government, and later made a Commander, has recently been named as a member of the American Mission, headed by Major-General James G. Harbord, which is to investigate conditions in Armenia and Transcaucasia.

THE TECHNOLOGY BUREAU

Gibbs and Read at work

THE COZY CORNER OF THE TECH BUREAU

CHANGES IN THE INSTRUCTING STAFF

The following changes in the instructing staff are announced for 1919-20

APPOINTMENTS

Dr. Vannevar Bush, B.S., M.S., Eng.D., Associate Professor of Electrical Engineering, beginning August 15, 1919.

Tenney Lombard Davis, Ph.D., Instructor in Organic Chemistry.

Harold U. Faulkner, B.A., M.A., Ph.D., Instructor in History.

Arthur Leo Hamilton, S.B., Instructor in Mechanical Engineering, replacing Mr. Sawyer.

Lieutenant Arthur Lindsay Nelson, S.B., Instructor in Electrical Engineering.

Stephen Norton, Instructor in Physics.

Frederick Brueton Philbrick, S.B., Instructor in Electrical Engineering.

France Vinton Scholes, Instructor in History.

Edwin Blythe Stason, B.A., S. B., Instructor in Electrical Engineering.

Louis Henry Young, S.B., Instructor in Physics.

S. D. Zeldin, Instructor in Mathematics.

F. S. Dellenbaugh, Instructor and Research Assistant in Electrical Engineering.

Everett Jackson, Instructor and Research Assistant in Electrical Engineering.

Timothy Edward Shea, S.B., Instructor in Physics and Research Assistant in Electrical Engineering, beginning June 23, 1919.

Joseph Kaufman, Research Assistant in Electrical Engineering, beginning June 23, 1919.

Edy Velander, Secretary of the Research Division of the Electrical Engineering Department, beginning July 1. Part-time Assistant in Advanced Alternating Currents for the year 1919-20.

James Alexander Beattie, S.B., Half-time Research Assistant in Physical Chemistry.

Leighton Bruerton Smith, S.B., Half-time Instructor in Theoretical Chemistry.

Robert B. Cheney, Assistant in Mechanical Engineering.

Lester C. Conner, Assistant in Organic Chemistry.

Anthony William Contieri, S.B., Assistant in Organic Chemistry.

James Holt, S.B., Assistant in Mechanical Engineering.

Chester Earl Linscott, Assistant in Inorganic Chemistry.

Captain Richard Whiting Logan, S.B.,Assistant in Mechanical Engineering.

Elwood McElwain Manter, S.B., Assistant in Mechanical Engineering.

Harold Lionel Miller, S.B., Assistant in Mechanical Engineering.

Malcolm W. Moss, Assistant in Physics.

Ernest F. Perkins, S.B., Assistant in Inorganic Chemistry.

Clarence Harvey Sorum, Assistant in Technical Analysis.

Carl Louis Svenson, S.B., Assistant in Mechanical Engineering.

J. Berthold Barbehenn, Part-time Assistant in Inorganic Chemistry.

William Patrick Corbett, Half-time Assistant in Physical Training.

Jorge Victor Davila, Half-time Assistant in Physics.

William J. Finlay, Part-time Assistant in Inorganic Chemistry.

Paul Maxon Phillips, Half-time Assistant in Analytical Chemistry.

Leo Weinbert, Half-time Assistant in Theoretical Chemistry.

Laurence Elmer Weymouth, Half-time Assistant in Theoretical Chemistry.

Colonel T. H. Dillon, Professor of Electrical Engineering.

W. H. Timbie, Associate Professor of Electrical Engineering.

C. Hale Sutherland, Assistant Professor of Civil Engineering.

Stephen R. H. Codman, Special Instructor in Design.

Ralph Harrington Doane, Special Instructor in Design.

Edwin Sherill Dodge, Special Instructor in Design.

Henry Chandler Stearns, Special Instructor in Design.

Alexander Baltzly, Instructor in History.

Howard Walker Boal, Instructor in History.

H. L. Bowman, Instructor in Civil Engineering.

Eugene Parker Chase, Instructor in History.

H. G. Morse, Instructor in Mechanical Engineering.

Aaron Paul Pratt, Instructor in Public Health Administration in the School of Public Health, replacing Mr. Turner, resigned.

Frederick A. Stearns, Instructor in Mechanical Engineering.

Arthur Lawrence Townsend, Instructor in Mechanical Engineering.

Joe Jacobs, Assistant in Physics.

RESIGNATIONS

Fred P. Emery, Professor of English, leaves July 1, 1919.

Selskar M. Gunn, Associate Professor of Sanitary Biology and Public Health, leaves October 1, 1919.

Percy Marks, Instructor in English, leaves June 30, 1919.

Chester A. Rogers, Instructor in Mechanical Engineering, leaves June 30, 1919.

C. B. Sawyer, Instructor in Mechanical Engineering, leaves June 30, 1919.

D. M. Taylor, Instructor in Mechanical Engineering, leaves June 30, 1919.

W. H. Wilson, Instructor in Mathematics, leaves June 30, 1919.

C. H. G. Gray did not accept appointment as Instructor in Electrical Engineering.

A. L. Russell did not accept appointment as Instructor in Electrical Engineering.

James M. Barker, Assistant Professor of Civil Engineering, August 11.

H. P. Hollnagel, Assistant Professor of Physics, October 1, 1919.

Dean A. Fales, Instructor in Mechanical Engineering.

E. E. Richardson, Instructor in Analytical Chemistry.

Clair E. Turner, Instructor in Public Health Administration in the School of Public Health.

P. O. Yeaton, Instructor in Mechanical Engineering.

LEAVE OF ABSENCE

Professor J. C. Riley, returned August 5, 1919.

E. H. Schell, returned September 1, 1919.

Professor J. F. Morris, returned July 1, 1919.

Dean A. E. Burton, leave of absence for the summer.

APPOINTMENTS SINCE SEPTEMBER 1

DeWitt C. Croissant, Professor of English.

Hartley B. Gardner, Instructor in Electrical Engineering.

J. W. B. Kennard Half-time Instructor, and Research Assistant in Electrical Engineering.

Earle E. Richardson, Instructor in Industrial Physics.

A. K. Bak, Assistant in Mechanical Engineering.

Philip R. Morss, Research Assistant in Industrial Physics.

RESIGNATIONS

Everett Jackson, Instructor and Research Assistant in Electrical Engineering.

Edwin B. Stason, Instructor in Electrical Engineering.

Holden C. Priest, Assistant in Mechanical Engineering.

LEAVE OF ABSENCE

Frank Aydelotte, Professor of English, granted leave for one year from October 1, 1919, as Secretary of the Rhodes Scholarship Trust.

Professor Ralph Adams Cram retired October 1, 1919, from his professorship in the Department of Architecture and has been appointed Lecturer on the Philosophy and History of Architecture.

Appointments Since October 1, 1919

James R. Jack has been appointed to the Institute's staff in the Department of Naval Architecture and Marine Engineering.

Colonel Alfred A. Maybach has been detailed by the War Department as professor of military science and tactics, beginning October 11, 1919, to fill the position formerly held by Colonel E. T. Cole, who was relieved on July 15, 1919.

John H. Ruckman, Instructor in English.

Robert R. Cawley, Part-time Instructor in Modern Languages.

Rudolf H. Ernst, Part-time Instructor in Modern Languages.

Albert H. Moore, Part-time Instructor in Modern Languages.

E. A. Freeman, Assistant in Civil Engineering.

L. A. Jackson, Assistant in Civil Engineering.

Scott Keith, Assistant in Civil Engineering.

D. B. Tremere, Jr., Assistant in Mining Engineering and Metallurgy.

Harold R. Kepner, Half-time Assistant in Civil Engineering.

John P. Putnam, Half-time Assistant in Physics.

Joseph J. Schaefer, Half-time Assistant in Organic Chemistry.

Francis W. Sears, Half-time Assistant in Physics.

C. E. Ruby, Half-time Assistant in Theoretical Chemistry.

Theodore Shedlovsky, Half-time Assistant in Theoretical Chemistry.

Alexis R. Wiren, Half-time Assistant in Naval Architecture.

NEW MEN IN THE ELECTRICAL ENGINEERING DEPARTMENT

Col. T. H. Dillon, United States Army, appointed a professor of electrical engineering

Colonel T. H. Dillon of the Engineers Corps of the United States army, has resigned from the army and his appointment to a professorship of electrical engineering at the Massachusetts Institute of Technology is announced, thereby adding his name to the already notable electrical engineering staff of that institution.

Colonel Dillon graduated from the Military Academy at West Point in 1904, and was appointed to the Engineers Corps of the army. After some military duties he was assigned to the Engineer School of Application of the United States army, from which he graduated in 1907. Since then he has had a wide, varied and notable engineering experience.

He was in Cuba during the American occupation as assistant to the Director of Public Works. He was occupied in the Philippines on the military survey of the Island of Luzon, part of the time being in charge of the work. Later he was located at Portland, Oregon, in charge of the construction of the Dalles-Celilo Canal around the Dalles of the Columbia River, and the roads in the Crater Lake National Park. He then was assigned to Panama and made electrical engineer of the Panama Canal and superintendent of the Gatun Locks. Here he was also in charge of engineering in the locks division and the hydrographic division. He had the unique experience of locking the first great ships through the Gatun Locks.

In 1918 he went to France as colonel in command of the 37th Engineers, which was the notable electrical and mechanical regiment whose reputation is widely known. In France he was Deputy Chief Engineer of the First Army of the American Expeditionary Forces during the St. Mihiel, the Aisne-Marne and Argonne-Meuse campaigns, in charge of the mechanical and electrical work, water supply, general construction, army shops and engineers' supplies for the army throughout these notable campaigns.

After the armistice, Colonel Dillon was made Deputy to General McKinstry who was the Chief of the Board of Damages in Allied Countries, and as such Colonel Dillon had charge of the plans for making the estimates for the American Peace Commissioners of personal and property damages suffered by the Allies on account of the aggressions of the enemies in the war.

Colonel Dillon brings a large fund of scientific training and engineering experience to his duties at the Massachusetts Institute of Technology, where he will make a specialty of instruction in the problems of electric railroads, including tramways and electrification of steam railroads and in the problems of power transmission.

Dr. V. Bush has been appointed Associate Professor of Electrical Engineering at the Massachusetts Institute of Technology. Dr. Bush is a graduate of the electrical engineering course of Tufts College and received an M. S. degree from that college in 1914. He received the degree of Doctor of Engineering from the Massachusetts Institute of Technology in 1916. After graduating from Tufts he had been an instructor in the Tufts staff with a notable record as a teacher and was later made an

Assistant Professor. During the course of scientific researches in the war, Dr. Bush was associated with the New London researches of the United States navy for the detection of submarines and did distinguished service in that work. The Doctor's thesis which he presented at the Massachusetts Institute of Technology will be remembered by electrical engineers from a paper read before the Mid-Winter Convention of the American Institute of Electrical Engineers in February, 1917, entitled "Oscillating Current Circuits by the Method of Generalized Angular Velocities," in which a discussion is given of the "threshold impedances." Dr. Bush is now engineer of the American Radio and Research Co.

In his new position, Dr. Bush will take up a portion of the instruction to undergraduate students heretofore given by Professor Wickenden, who recently resigned to go permanently into the service of the Western Electric Company, and in addition, Dr. Bush will give a course of advanced lectures to postgraduate students and dedicate the rest of his time to research.

Messrs. Frederick S. Dellenbaugh, Columbia University, 1910, Arthur L. Nelson, Massachusetts Institute of Technology, 1915, and F. B. Philbrick, Massachusetts Institute of Technology, 1918, have been appointed Instructors in Electrical Engineering at the Massachusetts Institute of Technology.

Mr. Dellenbaugh was a captain of the Signal Corps in overseas service during the war. He graduated from the electrical engineering course at Columbia, and has been in the employ of the Crocker Wheeler Manufacturing Company and the Westinghouse Electric and Manufacturing Company in the departments of Design and Commercial Engineering. His particular duties in his new appointment will be in the teaching of Dynamo Design and the Mechanical Applications of Electric Power. Mr. Dellenbaugh will also give a portion of his time to research along lines relating to electrical machinery.

Mr. Nelson graduated from the electrical engineering course of the Massachusetts Institute of Technology. During the war he has been a lieutenant in the Engineer Corps of the navy with important work relating to construction of power plants and supply of power at the submarine base. After graduating, he had experience with the C. H. Tenney Company in construction and operation of electric plants. Mr. Nelson's work will be instruction relating to central stations and distribution systems. He will also carry on some work as a consulting engineer.

Mr. Philbrick, since graduating, has been in the employ of the General Electric Company. His work at the Institute will be instruction in electrical measurements under the direction of Professor Laws and carrying on researches relating to electric circuits which Professor Laws has on hand.

NEWSPAPER COMMENT ON ENDOWMENT FUND CAMPAIGN

If you want to see how well Technology is thought of, how encouragingly it is cheered on to success in its present great efforts, turn to the Miscellaneous Clippings on page 550 and read a few of the notices we clipped during the last month.

ARCHITECTURAL DEPARTMENT WILL LOSE PROFESSOR CRAM

Eminent architect will undertake international project

Owing to the pressing requirements of his business interests, Professor Ralph Adams Cram, since 1914 head of the Institute's Department of Architecture, has found it necessary to give up all his duties as a member of the faculty. He will continue his connection with Technology only in the capacity of special lecturer, and during the coming winter will give two courses of lectures covering the philosophy of architecture and architectural history.

Regarding the announced reason for his resignation, Dr. Cram has refused to particularize further than to admit that the immediate project demanding his attention is an architectural undertaking "of more than national importance." This undertaking, he stated, will probably require him to spend much of his time the next five years in Europe, thus making it impossible for him to retain his professorship.

For some time Dr. Cram, who is widely known throughout the country as an author and as a member of the firm of Cram & Ferguson, Boston architects, has been permitting his business affairs to be endangered in order to devote his time to the Institute. In addition to his courses in advanced design, he assumed during the war the work of two other professors who entered the service. He leaves the Institute at a time when a new plan of instruction is about to be introduced in the Department of Architecture. It is understood that this new plan has the full approval of the retiring head of the department. One of its provisions is the arrangement of the lecture schedules in such a way that in the event of Dr. Cram's necessary absence in Europe during the winter his lecture courses may be concluded upon his return. In this way, it is thought that the department will not be entirely deprived of Professor Cram's unusual experience.

Nevertheless, in his withdrawal from active participation in the affairs of the department, it is recognized that Technology will be a heavy loser. He has had a long and successful career as an architect, having started practice in 1889. He received the degree of Doctor of Literature from Princeton University in 1910 and of Doctor of Laws from Yale in 1915. In his home city, Dr. Cram is chairman of the Boston Planning Board and president of the Boston Society of Architects. He is also a Fellow of the American Institute of Architects, of the North British Academy of Art, and of the Royal Geographic Society of London, an honorary member of the Royal Institute of British Architects, and a member of the American Federation of Art and the Architectural Association of London.

Hundreds of school and educational buildings throughout the United States, Canada, and Cuba are witnesses to his ability and originality in design. He supervised, some years ago, the entire rebuilding of the United States Naval Academy at West Point, and planned the Graduate College and Cleveland Memorial Tower at Princeton University. Other buildings which are the product of his genius are the Church of St. Thomas, New York City, the Fourth Presbyterian Church of Chicago, the Calvary Episcopal and Baptist Churches of Pittsburgh, and all the buildings of Rice Institute, Texas. He is, at the present time, architect for the Cathedral of St. John the Divine in New York City and the Library of Williams College.

Among Dr. Cram's contributions to the literature of architecture and to literature in general are "The Decadent," "Black Spirits and White," "Church Building," published in 1901; "Ruined Abbeys of Great Britain," 1906; "Impressions of Japanese Architecture and Allied Arts," 1906; "The Gothic Quest," 1907; "Excalibur," 1908; "The Ministry of Art," 1914; "The Heart of Europe," 1915.

Dr. Cram has also been a frequent contributor of both verse and prose to the "Century Magazine," the "Atlantic Monthly," and the "Catholic World."

At the present time the nature of the work to which Dr. Cram refers as a project "of more than national importance" is not known. Sufficient is known, however, to determine the fact that a very great honor has been conferred upon Dr. Cram in choosing him as the architect for the undertaking. Inasmuch as his years at Technology are the only time he has ever diverted from his business for the purpose of teaching, it is felt that the honor accorded him reflects peculiarly upon the Institute.

1879 CLASS SONG

We sing the praise of Seventy-nine,
  A lot of jolly fellows,
The class that really has some class,
  That leads but never follows.
We toast the comrades far away,
  And let us not repine
For those who've gone before us,
  But cheer for Seventy-nine.

We may have left old Rogers,
  Where Seventy-nine saw light,
For the home upon the river,
  So beautiful and bright.
But old or new, 'tis all the same,
  Home dingy or home fine,
We raise our glasses full on high,
  And drink to Seventy-nine.

Chorus

O Seventy-nine, we sing thy praise,
  We all revere thy name;
To thee our voices, glasses raise,
  To thy undying fame.

ACTIVE OFFICERS FOR MILITARY SCIENCE COURSE

Colonel Cole's loss greatly felt, but military course enlarged

After well over a decade of faithful and popular service at Technology as head of the Department of Military Science, Col. Edwin T. Cole has been taken away from us as the result of a new policy at Washington. The War Department recently considered a new policy with regard to the officering of the student military organizations of the colleges and universities throughout the country. The decision was that all the retired army officers who are now holding positions of various ranks as professors of military science and warfare should be relieved from service and be replaced by active officers.

In line with this policy, a telegram was received at the office of the Department of Military Science informing Colonel Cole that his release from active duty would date from July 15, 1919.

Captain Brainerd, who during the past year was second in command of the Department of Military Science at the Institute, has recently been transferred to the office of the Reserve Officers Training Corps Inspector of the First District, whose office is in the Little Building. The departure of Colonel Cole and Captain Brainerd left the direction of military activities for a time in the hands of two sergeants.

The vacancy left in the Military Science Department by the retirement of Col. Edwin T. Cole has been filled by Col. A. A. Maybach, C. A. C., formerly of the General Staff Corps of the United States army. The Colonel has had more than sixteen years experience as officer and instructor. Previous to his return from France for duty at Washington in May, 1918, Colonel Maybach had been divisional intelligence officer on the staff of the commanding general of the 26th Division. He accompanied the 26th when it went to France and served on the Division Staff until his return to the United States in May, 1918.

Colonel Maybach is carried now on the rolls of the faculty of the Institute as a full professor of Military Science and he heads the department which is this year to be made more comprehensive and to give more extended instructions than heretofore.

He graduated from the United States Military Academy at West Point in 1901, was promoted second lieutenant, Coast Artillery Corps, February 2, 1901, in which capacity he served at Forts Terry and Totten, of the Coast Division, New York. In 1905 promotion to the rank of first lieutenant, C. A. C., came together with a detail back from West Point to serve as an instructor in tactics. In June, 1909, he became a captain and as such was on duty at Fortress Monroe, Virginia, Fort Barrancas, Florida, and Fort Washington, Maryland, until May, 1914, when he was sent to Panama, where he stayed until June, 1917. On June 4, 1917, he was detailed to the General Staff Corps and his promotion to the rank of major came August 20 following.

He accompanied the 26th Division to France and was in charge of "G-3," which portion of the Divisional Staff was in charge of operations. In May, 1918, he returned to the United States for duty with the General Staff at Washington and was promoted to lieutenant-colonel. His present rank of colonel, Coast Artillery Corps, dated from September, 1918. He was relieved from the General

Staff Corps detail October 10, 1919, and Tuesday reported at Technology for duty as head of the Department of Military Science.

Under Colonel Maybach are several officers of highest calibre and experience, many of whom are Technology graduates. The second in command is Lieutenant-Colonel Green, Technology, '09, assisted by Major H. F. Clark, '12, who is also a graduate of the Institute. The non-commissioned officers are all old-timers who have seen an average of fifteen years service in various branches of the army.

Lieutenant-Colonel Green completed Course VI in June, 1909, and received his commission as second lieutenant the following year. After a year at Fortress Monroe, Virginia, he was sent on Texas border service from which he was transferred to Fort Washington, Maryland. After spending three years at Fort Greble, Rhode Island, he returned to Fortress Monroe with the rank of first lieutenant; he was stationed there until February, 1919. His record of promotion is exceptional: captain, 1917; major, June, 1918; lieutenant-colonel, October, 1918. The Colonel began work at the Institute February 19, 1919, and had charge of a group of sophomores at Fortress Monroe for Coast Artillery instruction this past summer. Colonel Green is in charge of all the military instruction and is also conducting a special class of sophomores who desire thorough study of military work.

Major H. F. Clark, '12, received his commission as captain June, 1917, when he was assigned to the second Engineers Training Camp at Fort Leavenworth. During his overseas service, beginning January, 1918, he was under fire with the Second Division at Chateau-Thierry and later with the Fifth Division in the Vosges. After attending schools in France he was appointed Senior Instructor at the Third Corps Engineering school. After a little over a half year there he was promoted to an officership on the staff of the chief engineer at Washington, which position he filled for three months. He is now in charge of the engineering unit at Technology and will in addition drill the freshmen in a special class in intensive, advanced work.

Among the non-commissioned officers there is Master Engineer Krom who has had eleven years training in the regular army. During the war he held the commission of captain with the 602d Engineers. He earned two service stripes in the Argonne and at St. Mihiel. He also gained valuable experience during the eighteen months service in the Philippines. Engineer Krom is assistant instructor in the engineer unit, and will help drill the freshmen.

Assistant to Colonel Green and acting sergeant major is 1st Sergt. Fred G. Martin who has seen twenty-one years service in the infantry and nine in the calvary. He fought in the Philippine insurrection, Spanish-American and World wars. In the latter he was at the St. Mihiel and Argonne fronts, totaling ten months in France. His wide experience and his amiable disposition are expected by those in charge to make him a favorite with the engineering class to which he is assigned.

Another of the non-commissioned officers is Sergt. James T. Vaughn, who has had fifteen years experience with Coast Artillery units. During the recent war he took part in four major operations with the 44th Artillery, passing seventeen months in the field.

The remaining member of the military department is Sergt. Julian B. Ryan of the cavalry. He has seen nineteen years service, most of which was spent in the Philippines with the 7th and 5th Cavalry. He was discharged with the commission of captain in August and immediately re-enlisted and was assigned to Technology as assistant instructor.

A POPULAR INSTRUCTOR OF FORMER DAYS

Students in old Rogers from 1909-1915 will remember "Dave Carb"

THE "Century Magazine" of August in a note to an article by David Carb entitled, " They are Not Like Us," says: " David Carb was an instructor in the Massachusetts Institute of Technology until January, 1915, when he went to France to drive an American ambulance. Upon the entrance of the United States into the war, he returned to America and attempted to enlist, but for physical reasons was rejected for Plattsburg and at a recruiting station in New York City. He contrived to bring his case to the personal attention of Surgeon-General Gorgas, who after due consideration informed him that the War Department had so many men within the draft age to call — so many more than it could possibly train and convey to France— that it was excluding all but the physically perfect. Mr. Carb then returned to France for the American Red Cross, took his appeal to Brigadier-General McCoy, then colonel, and secretary to the General Staff. He investigated, and learned that nothing could be done. Thereupon the author volunteered for the Foreign Legion of the French Army, was sent to the Artillery Officers' Training School at Fontainbleau, and thence to the front. His defense of France against the fantastic notions of the American " doughboy " is needed at this time when detraction of our great ally fills the accounts of the returning soldiers.

Carb saw a year's service as volunteer ambulance driver, then, later, two years' service as aspirant in the French army, and, later, lieutenant. He saw actual fighting before the armistice and won a Croix de Guerre for bravery under fire. Later he was with the French army in Germany and Belgium.

His article in the August "Century Magazine" is the forerunner of what promises to be an authoritative and sympathetic book on the poilu by one who served with them.

At present Lieutenant Carb is lecturing in America in the French uniform, under the auspices of the French High Commission, with the aim of explaining the French, and particularly the French poilu and common people, to a public all too ill-informed by certain disgruntled ones among our own soldiers. He aims to bridge the widening gulf between the countries, although, with full permission of the French authorities, he is candidly attacking certain recent French diplomatic and military policies which he deems dangerous. He will probably speak at the Institute in the near future.

A CORRECTION

IN the July REVIEW, page 357, line 7, the entry in the " List of Publications " should read " Death of Frederick Brooks," in stead of " Bowles."

CHARLES R. CROSS, '70.

TECHNOLOGY CO-OPERATES WITH GREAT INDUSTRIES

The new schools in Electrical and Chemical Engineering at industrial plants

Through the efforts of some of the country's most eminent engineers, the plans have been developed for the re-opening of Course VI-A, Technology's co-operative course in Electrical Engineering carried on jointly by the Institute and the General Electric Company, so that with the opening of the scholastic year things will be ready for the students to take up their work in the plant. Mr. W. H. Timbie, who held the position of editor-in-chief of vocational texts for the Government during the war, has recently been appointed Associate Professor of Electrical Engineering, and has been given charge of this course. Professor Timbie will spend part of his time at the Institute, but will devote the greater part of his efforts toward the instruction of the work of the men at the plant of the General Electric Company, at West Lynn, Mass. The course will be jointly supervised by the company and the Institute through a committee representing both. Mr. Frederick P. Fish, chairman of the State Educational Committee, will act as chairman of this committee. Professor Elihu Thompson and Mr. Magnus Alexander, two of the most noted industrial men in the country, will represent the General Electric Company, while Professor Dugald Jackson and Professor Frank A. Laws will represent the Institute.

Professor Jackson says in regard to the new course:

" It was upon the solicitation of such men as the president of the General Electric Company and the president of the Westinghouse Co. that Course VI-A was established. It is jointly supervised by the Institute and the company through a committee representing both, the members of the committee being:

Mr. Frederick P. Fish, Chairman; Professor Elihu Thomson, for the General Electric Company; Mr. Magnus Alexander, for the General Electric Company; Professor Dugald Jackson, for the Institute; Professor Frank A. Laws, for the Institute.

Also a professor of the Institute is associated with an officer in charge of instruction for the company, in the duty of supervising the progress of the students while at the works. In the final year of this course, considerable latitude may be exercised by the students in the selection of their line of work, and their assignments will be made either to shop management in the works' office or to research in the company's research laboratories, depending upon the aptitudes and preferences of the individual students.

Professor Timbie of the Institute will be at the Lynn plant three days a week to instruct in regular classes in subjects on shop work and the electrical theory. The work this year opened Monday, October 6. Group A which is assigned to the works for the first term located Saturday night in the Thomson Club after registering at the Institute.

For the class entering on the co-operative work this year, the work begins on October 6, 1919, and continues for eleven terms, there being four terms per year. For classes entering in later years an additional term will be provided in the first summer.

The first ten terms beginning with October 6 are spent alternately in residence at Technology and at the works, the Institute terms being of eleven weeks each followed by two weeks vacation, and the works terms being of thirteen weeks each. Each class is divided into two groups of students, one group being at the Institute and the other group being at the works in each term.

The two groups exchange places at the end of each term. The eleventh term occupies nine weeks immediately prior to the Institute Commencement. This term is spent by both groups at the Institute. At the conclusion of the prescribed work an optional additional term of thirteen weeks at the works is offered.

Successful completion of this course leads to the degree of Master of Science conferred at the Institute Commencement which comes at the end of the prescribed work. The degree of Bachelor of Science, conferred as of the year preceding the conferring of the Master's degree, is associated with the Master's degree.

The number of men who may be admitted to the first co-operative year is at present limited to thirty, with a possible increase to a maximum of forty in future years. On account of this limitation of the number admitted to the course each year, and the desirability of maintaining the Groups A and B of each year alike, no student should apply for admission to the course unless he expects to carry it through to completion, unless prevented by exceptional circumstances.

While at the works the students are subject to the usual requirements applying to employees of the General Electric Company. Compensation is paid by the General Electric Company to students in this co-operative course at an hourly rate, coming to approximately fifteen dollars a week for the first two terms at the works, seventeen dollars and a half a week for the next two terms at the works, and twenty dollars a week for the last two terms at the works. This makes a total payment of over $1300 during the co-operative period. Students also share the regular conditions of bonuses, and in case of working overtime are paid at the rate of time and a half. The working week in the shops is forty-eight hours and in the office, forty-four hours, which provides for Saturday half holidays in both cases. Living accommodations for students when at the works are satisfactory, as the Thomson Club, a residence near the works where excellent sleeping rooms, shower bath room, reading room and recreation rooms are provided, has been set aside by the General Electric Company, for these students. Students receive these residence accommodations for a charge of $3.25 per week per student. Table board is not provided in the Thomson Club, but may be obtained in the immediate neighborhood, and the company operates a noonday cafeteria and lunch room at the works.

The residence of the co-operative students at the Institute is in periods substantially coincident with the regular terms of the Institute and consequently the groups are able to enter into the usual student life of the Institute.

There is no contract between the students and the General Electric Company, the graduates of the course are free to enter employment wherever offered and in accordance with their personal desires.

Well qualified students who have completed at another institution the equivalent of the work of the first two years of the electrical engineering course at the Institute of Technology may be admitted to advanced standing at that time, but the course is particularly intended to meet the needs of students who have spent the first two years in successful study at the Institute.

Extensive plans are being made whereby students in the regular electrical engineering course will be able to make several trips to the General Electric works at Lynn. They will be shown through the shops by guides and officers of the company who will deliver lectures regarding various phases of the work.

A library has been inaugurated in the student clubhouse in Lynn. It was contributed to in part by the Institute and in part by the General Electric Company. It has been supplied with numerous volumes on technical subjects, and also will be supplied regularly with current periodicals of a like nature, and it should be a great help to the students at the works.

Professor Jackson of Course VI adds the following statement:

"The General Electric Company, normally employs sixty-five thousand people in its many plants throughout the United States. It designs and manufactures electrical machinery and apparatus of nearly every description, steam turbines, of small, medium and large capacity, and many other mechanical devices of intricate design, the annual sales value of which exceeds one hundred million dollars.

"The West Lynn plant of the company is located at Lynn, Mass. This plant is the second largest of the many factories, covering more than two hundred acres and employing over twelve thousand men and women.

"Course VI-A was created to supply the ever-increasing demand for men of well-grounded and specialized knowledge added to a broad education, who have the power to apply the theories of science to the practical requirements of manufacturing. This demand has led to the establishment of a course of study and practice in which the advantages of the instruction at the Institute and the practical training in the shops of the General Electric Company are joined for the purpose of developing the highest scientific, engineering and administrative faculties of those who desire to go into the manufacturig industries. This course affords a definite professional education of high order for the technical and executive responsibilities of the electrical and manufacturing industries.

"The course covers a total of five years, the first two being identical with the regular course in electrical engineering. Course VI, at the Institute, and the last three being divided between instruction in practice at the West Lynn works of the General Electric Company. The instruction at the Institute during the first four years of Course VI-A is similar in method and content to the usual course in electrical engineering at the Institute, with certain omissions and abridgements for which equivalents are provided at the works. The work of the final or fifth year comprises advanced or postgraduate study with the emphasis on problems of administration, project design and creative research."

Besides Course VI, Professor Walker of the Chemical Engineering Department announces the resumption of the graduate course, which, for one year before the war was conducted by resident professors in important industrial plants in five states, where the advanced students did the research work of the plants under the supervision of Technology teachers.

Another important venture is the co-operative industrial chemistry work being conducted in the research laboratory on the first floor of Building Two which has developed rapidly. Eleven men are now engaged in the experiments, and problems are being solved for five different industrial concerns. The work is being carried on according to a novel plan arranged by those in charge of the laboratory, in preference to the bonus system employed by most educational institutions doing work for manufacturing concerns.

Under the bonus system the company for whom experiments are made pays the experimenting chemist a bonus, which is regulated by the value of the result obtained. The system being used here is based on the employment of the chemist who makes the experiments by the Institute, and not by the company. The amount charged the client by the Institute is somewhat more than the salary of the man employed. Out of this surplus the overhead expenses of the experiment are paid, and the remainder is devoted to making experiments of a "pro bono publicum" nature, that is, the solving of chemical problems of general interest, the results of which are published for the information of the public.

The chemists employed on these industrial experiments are chiefly men who have received their master's degrees, or who have had equivalent training. The public experiments are usually made by recent graduates of the Institute, or by post-graduate students. In the absence on his vacation of Professor Walker, director of the research laboratory, Professor Lewis is in charge, with Robert E. Wilson as Assistant Director.

So far the plan outlined above has worked out to the complete satisfaction of all the parties concerned. Large industries appreciate the advantage of having their research done by men who can consult members of the faculty. Even those companies which maintain very large research forces find that the upkeep of these forces per man is approximately three times the salary paid an investigator at the Institute. Included among the concerns for whom work is now being done are the several du Pont de Nemours companies, the Vacuum Oil Co., the National Tube Co., the National Electrolytic Co., and the Clinton Metallic Paint Co.

Practically all of the machinery and apparatus in the hydraulic laboratory in Building Three is being utilized by Mr. (Clemens) Herschel, of New York, an internationally famous engineer, who has been making experiments here for more than a week aided by a corps of assistants. The exact nature of the experiments has not been disclosed, but it is known that the work has to do with the accurate measurement of the amount of water flowing over several types of weir under various conditions. It is hoped that one result of the experiments will be an improved system of distributing water in the hydraulic laboratory. It is expected that the experiments will continue for several weeks.

Mr. Clemens Herschel, who graduated from Harvard in the class of 1860, is one of the most prominent hydraulic engineers in the country. From 1879 to 1889 he was chief engineer of the Water Power Company of Holyoke, Mass., and for the following eleven years was superintendent of the East Jersey Water Company. He served as railroad commissioner of Massachusetts from 1881 to 1883.

Mr. Herschel is probably best known for his invention of the Venturi Water Meter, for which he was awarded the Elliot Cresson gold medal by the Franklin Institute of Philadelphia. During his practice of hydraulic engineering he has been the author of many papers and magazine articles of interest to engineers, and has published several books. "Continuous Revolving Draw Bridges" appeared in 1875, and was followed by "One Hundred and Fifteen Experiments," 1897, and "Frontinus and the Water Supply of the City of Rome," 1889.

Mr. Herschel is a member of the Boston Society of Civil Engineers, the American Society of Civil Engineers and the London Institute of Civil Engineers.

AS OLIVER WENDELL HOLMES SAID—

"Fate tried to conceal him by naming him SMITH!"

SCOTCH EXPERT FOR NAVAL ARCHITECTURE

Professor Jack, from the place where good ships are built, to teach our men

ALTHOUGH the Institute already administers a department of naval architecture so well that Congress long ago enacted a law requiring all the naval constructors graduated at Annapolis to come to the Institute for further study, Technology authorities are continually seeking to improve the quality of the school. The latest development in this line has been to secure as a member of its instructing staff, James R. Jack, manager since 1900 of the extensive shipbuilding yards of the Denny Brothers at Dumbarton on the Clyde, Scotland.

Mr. Jack is a graduate of Glasgow University, where he specialized in the courses in naval design, as a young man entering the employ of the Denny Brothers. He steadily advanced his position until eighteen years later he was made general manager of the establishment. In the meantime his ability was recognized in other quarters, and he was appointed professor of naval architecture in the Royal Technical College of Glasgow in 1894. He resigned this position when the full care of the establishment at Dumbarton called for his whole attention. During his six years of faculty life, however, more than one thousand young Scotchmen passed under his teaching.

The firm of Denny Brothers is one of the most important in its line in the United Kingdom, and between it and Technology there has always been a friendly and appreciative relationship. A few years ago the son of one of the brothers was sent to the Institute, took the courses of naval architecture under Professor Peabody, and returned to a responsible position in the yard. Since his return the firm have spoken appreciatively of the benefit of his studies in America.

When, therefore, President Maclaurin broached the subject of the loan of Mr. Jack, his plea fell on attentive ears. The result is that the Scotch expert is now on the instructing staff of Technology. It has always been the aim of the Institute to make its courses as practical as possible, especially in the school of naval architecture and marine engineering, which was begun some twenty-five years ago. Its start consisted of a series of lectures by well known naval experts, and President Walker saw in these the germ of helpfulness to the country. The department was placed under the care of Professor C. H. Peabody, who had seen service in the navy, and since that day it has maintained its place as one of the leading schools in its specialty in the world.

Ten years ago Professor Peabody's staff was strengthened by the addition of Professor Hovgaard, formerly an officer in the Danish navy.

Eight or ten years ago Japan sent a large number of its experienced naval men to the Institute and on the basis of what it has learned it has been able to place its navy on an excellent footing. A few years later China followed the lead of Japan, and more recently the South American countries, Chile among them, have had government students at the Institute. The addition of Mr. Jack to the faculty is therefore along lines that the Institute has followed in the past, the introduction of a man who has a practical as well as theoretical knowledge of the matters he is to teach. This man has the experience of the manager of a yard with its thousands of employees, and at the same time he is at home in the academic chair.

President Maclaurin had more than one motive in inviting his fellow countryman to come across the ocean. It will be remembered that presently the Institute is to begin the construction of the Pratt Memorial School of Naval Architecture. Mr. Jack will also serve as an adviser to the Institute. As manager he had charge of experimental work; in this Technology has already a reputation, but it is reaching for better things.

The Institute is about to construct a special school for naval architects; Mr. Jack brings from Scotland the latest European ideas, as the Glasgow Technical College is rated very high, and before the war stood next to Charlottenburg in the estimation of a number of international investigating commissions. Then there is one further matter concerning which Mr. Jack's opinions will be valuable, namely the question of a towing tank. Technology has already a splendid towing tank, the Charles River, before its doors, in which the embryo naval architects have investigated many naval problems and exploded some seamen's superstititions. This is, however, out of doors, and for certain delicate experiments the conditions are not favorable. The Institute is therefore seriously considering building an up-to-date towing tank in connection with the new Pratt School. Mr. Jack, who will again be Professor Jack, has had a towing tank in Glasgow, and can judge and advise.

For a quarter of a century the Massachusetts Institute of Technology has maintained at comparatively large cost a department of naval architecture. This has effected a continuous but small output of trained naval architects. When war was declared the naval construction of the country practically depended on Technology alumni. Graduates, students and instructing staff were speedily enrolled in the service of the nation, and when the history is written there will be a brilliant page devoted to Technology. But the Institute is not satisfied; it is striving to make its teachings even more practical than ever, and seeks the best men for its needs, wherever it can find them.

A HINT TO LOCAL COMMITTEES

On the face of things this does not look like a good time to raise a lot of money. If a man tells you he can't afford this or that you are inclined to believe him and let him alone. But that isn't the way they do business in one community. Eliot Wadsworth, one of the two chairmen of the Harvard campaign, was telling the other night of his experience in a Western city where there are about one hundred and fifty graduates of the university. They were holding a dinner of a few prominent alumni and no sooner had they heard of the plans for the drive than they were anxious to get to work. "Let's settle this thing right up tonight," said the local chairman. "Put down the names of the Harvard men in town and I'll tell you what each one must give." At this point Mr. Wadsworth interrupted to ask how anybody could be so certain of the financial capabilities of the various men. "Oh, that's all right," replied the chairman. "We've had so many Liberty Loan and Red Cross drives out here that we know just how each man is fixed. And he's got to come across for Harvard just as he came across for the other things."

TECHNOLOGY WOMEN AS ARCHITECTS

THE " Virtues of Architecture," as glorified by that greatest of art critics, John Ruskin, has too long been the joy and exploitation of man—now woman is heard insistently claiming her share in the alluring profession.

Note how clearly the voice is sounding.

Miss Eleanor Manning, architect, Technology, '06, is chosen to give lectures this session at Simmons College.

Miss Ida Annah Ryan, 05, is the only woman of her profession who has ever won the " Travelling Scholarship," which sent her to Europe for a year's study.

Miss Florence Luscomb, '09, is a partner of Miss Ryan's. Miss Anna Biddle Frismuth, is known the nation over as a successful landscape architect, and Miss Mabel Babcock, '08, has added to her fame by designing the splendid grounds surrounding Technology.

Miss Lois Lilley Howe, '90, deserves honorable mention as she is the real pioneer in the field of architecture for women. She is one of the few women of America who has been admitted to the American Institute of Architects and the only woman member of the Boston Society of Architects.

So—Boston, according to tradition, here too, holds high place in leadership and is sending up the rockets to light the way.

Miss Manning in speaking of her profession, says:

" The important point which ought to be considered in studying architecture is that it requires special aptitude and very special training—but, given the power of visualization or conscientious imagination, any individual, man or woman, will find the profession most absorbing—providing they acquire the technical skill, the formation of which is given in the architectural schools."

Miss Manning, who is Miss Howe's partner, is much interested in all sorts of buildings as well as in designing new ones. She has had extensive travel in Europe, studying her art and when war came to us, she saw her most effective contribution to be in the line of her profession. She and Miss Ryan gave their services, without charge, for the planning and interior decoration of the Army and Navy Canteen on the Common. She is on the Executive Board of the Housing Association and is one of the founders and the present president of the Business Women's Club.

Miss Howe's career dates back fifteen years. She has been on the Board of Governors of the Copley Society for several years and has just been made a member of the Craftsman's Advisory Committee of the Society of Arts and Crafts. She studied at Massachusetts Institute of Technology and graduated from the School of the Museum of Fine Arts.

Many of the most attractive houses of Waltham are due to the work done by Miss Ryan of that city. Miss Ryan has the distinction of being the first woman to earn the master's degree from the Massachusetts Institute of Technology and has also studied abroad. Together with her architectural practice, she was associated for years with the office of the Building Inspector of Waltham, rising to be Superintendent of Public Buildings, but is now devoting her entire time to her profession. True to form when war was declared, Miss Ryan offered her talents to the Government at Washington and was the first woman to be employed in the drafting room of the War Department.

Miss Florence Luscomb was for six years with Miss Ryan and her architectural work has been varied, including not only residences but schools and a moving picture theatre as well. Her time since her graduation has been almost equally divided between her profession and work for equal suffrage. The latter has carried her not only over the State of Massachusetts, but also into Ohio, New York, Virginia, Rhode Island, New Hampshire and Maine. She is now the president of the College Equal Suffrage League and is scheduled to give a course of lectures in the education for citizenship plans of the Boston Equal Suffrage Association.

It is Miss Frismuth who has done with her art real humanitarian work in developing a landscape garden which she began as a " War Garden " and transformed as a " Peace Garden " right in the heart of Boston Common. And this is where Miss Frismuth began an educational campaign to prove to the general public that it doesn't take an elaborate layout of a large estate to show the wonders that can be performed by a clever landscape architect.

There are two other especially prominent women architects graduated from Technology. One is Miss Eliza Codd, '04, who has done some very notable work at Nantucket, and Miss J. Newkirk, '05, who is instructor in Architectural History at Wellesley. Miss Newkirk has just returned from an architectural excursion in France and Italy.—The Boston Evening Record.

TECHNOLOGY WOMEN

(From "The Woman Citizen")

Massachusetts' famous Institute of Technology has turned out so many men who have made a name for themselves that most people are apt to overlook the fact that it is a co-educational institution and has turned out fine women also. It is the oldest technical school in the country and from the day of its foundation has been open to women students. Ellen H. Swallow, '73, was the first woman student in Technology. She graduated with a degree in chemistry. Since her time there have been four hundred and seventy women graduates from Technology, approximately four per cent of the total number of graduates.

It is interesting to see how this number was distributed among the various schools. Thirty per cent were graduated in the Department of Biology and Public Health and another thirty in Chemistry; eight per cent chose Architecture, and the remaining thirty-two per cent were scattered among the various other courses. Sanitary Engineering, a comparatively modern development, claims several of the later graduates. Notable among them is Miss Celeste Johnson Brennan, '19, who has recently assumed the duties of sanitary inspector at the Penniman, Va., plant of the du Ponts. She is said to be the first woman employed in this capacity.

Katharine Dexter McCormick, '04, the prominent suffrage leader, graduated in Biology and Public Health. Since her graduation, she has always been actively interested in social service and public health questions, and has for many years been a member of the Board of the National American Woman Suffrage Association.

Technology women have always proved themselves loyal supporters of the Institute. In the present drive for a ten million dollar Endowment Fund which Technology is trying to raise, the first check received by the committee in response to Dr. Maclaurin's appeal to the alumni for funds came from a woman, Miss Elizabeth B. Hamlin, '96, of Boston, Mass.

TECHNOLOGY TO HAVE RADIO STATION

Students start strong organization

THE Technology Radio Society has made considerable progress in its drive to have its transmitting and receiving stations open for action by the time registration has been completed at the Institute. The officers of the society have purchased a complete receiving set in addition to parts for the antennæ, and are erecting the station at the present time. The site picked out for the location of the station is a corner of the foundry room which will be partitioned off as soon as possible, making a small room in which the set will be located. The society is to have two serials when the station is completed, one of which is already erected, going from the top of the power house smokestack to the top of the foundry building. This one is to be used for the reception of long distance radiograms, in conjunction with a long wave receiving set, and the other now under construction is to be used for short wave reception. The transmitter will be operated on the latter serial, probably on a wave length of 450 meters.

The society has purchased a Grebe short wave regenerative set, with a tuning range up to about eight hundred meters, and has also been successful in receiving as a gift from the Boston Navy Yard three navy receiving sets, one of which is valued at a thousand dollars. By the aid of this equipment, the station operators expect to receive practically any station in the world whose sending power will carry to Cambridge.

The transmitting set which will be used at the present time is one of a quarter-kilowatt primary capacity, of the rotary spark gap type; but it is expected that at a later date this equipment will be replaced by a very up-to-date arc set. If the plans of the society are carried out to their full extent, the end of this scholastic year may see the installation of a radio phone equipment.

To meet the expenses of the society incurred through this investment in appartus, the officers have decided to fix the dues at two dollars a year. The great number of ex-service and especially ex-radio men who are at the Institute this year is believed by the president to point to a membership of several hundred students.

FINAL REGISTRATION FIGURES

As we go to press, October 20

Total registration	3092
Freshmen	654
Sophomores	1017
Juniors	773
Seniors	454
Graduate students	108
Special students	86
From other colleges, included in the above	500

BUILDING CHANGES FOR THE COMING YEAR

War-time structures torn down — new buildings — many departments relocate and expand

Many changes were made around the Institute during the summer, foremost of which has been the work of razing " the wooden city." The next noticeable change about the Institute is the completion of the new service building on Vassar Street. In addition to this construction work, ground has already been broken for the long waited for Pratt School of Naval Architecture. The interior of Walker Memorial has had its share of changes, namely, redecoration of its interior and repolishing of the dining room floor.

Another important change is the enlargement of space and equipment in the Mechanical Engineering Department. Due to the great demand for instruction in Mechanical Engineering subjects, the whole of building three will be used by this department. Forty new pieces of machinery have been secured so that this acquisition together with additional space, will double the capacity of the department. A first aid station has been installed in the basement of building ten, adjoining the office of the Superintendent of Buildings and Power. The equipment of this miniature hospital is most complete and up to date.

For the past few weeks a gang of fifteen men have been at work making the track into one of the finest and fastest in the country. The enclosed oval has been seeded. All of the jumping and vaulting pits have been clayed and new frames have been put in.

The last of the work of tearing down the Student Army Training Corps and Naval Aviation barracks has been completed. However, some of the buildings were left intact and they were either used as laboratories or sold, two of the Naval Aviation wooden buildings having been moved and purchased by the Carr Fastener Company. The Young Men's Christian Association building on Massachusetts Avenue has been divided into two sections, one half being used as the office of the contractor of Pratt Memorial and the other half as a sawmill, during construction.

At the request of Mr. William Welles Bosworth, '89, the architect of the Institute buildings, the wooden retaining walls on one side of the Great Court have been lowered about two feet. This is for the purpose of comparing the older walls with the new, to see which will be more pleasing to the eye when the work of laying the permanent stonework is begun. The lowered walls give a broader view of the grass and garden plots immediately in front of the main entrance of the Institute.

The mystery of the low, stucco structure behind building eight has been solved. In order to keep in step with the other improvements around the Institute, the laundry, repair and supply shops which were heretofore scattered in various corners have been concentrated in one building.

The plant was constructed during the summer and went into operation on September 1. Its 1200 square feet of floor space is divided into various shops for machinists, carpenters, electricians, and plumbers. One of the chief features is the common stockroom which can adequately handle the repair parts for all departments.

Another important section is the laundry, which is equipped to handle not only the laundry of the Institute but also that of the dormitories. Note should be taken that Technology is the only college which extends the latter service to its students.

DEPARTMENTS RELOCATE

Owing to the large number of students expected next year, Dr. Dewey's department of Engineering Administration is to move to the first floor of Building One to give the enlarged History and Mathematics classes more room.

The Annapolis students in Naval Construction are likewise going to take up new quarters in Building One, on the third floor. This will give them the privacy required, as they can practically shut off that section of the building. The quarters for both departments are ready for the change with the exception of painting.

The chemical laboratory for the Mining Engineers, on the fourth floor of Building Eight, is likewise nearing completion. Holes for the water and gas pipes have been drilled, and some of the plumbing installed.

The rapid growth in the demand for instruction in mechanical engineering subjects has made necessary an enlargement of the space and equipment devoted to this course.

With the present equipment and the present number of students, it would require sixty-six hours a week of classroom instruction to give all the students the amount of instruction called for, whereas the normal Institute week contains only thirty-nine hours. Since the Mechanical Engineering Department is called on to furnish instruction not only to men in Course II, but to men in the chemical, electrical, and other courses as well, the importance of enlarging the facilities of this department can readily be seen.

Accordingly, plans are being formed whereby the whole building three will be used by the Mechanical Engineering Department. A new building is being erected on Vassar Street to accommodate the wood-working shop and the Building and Power Department, which up to the present have been located in the basement and on half of the first floor of Building Three.

On the third floor of this building the partitions are being removed so as to make a large, well-lighted space for the machine tools and vise and bench work laboratories. In the southwest corner of this floor a demonstration room is being built. This room will seat ninety-five, and will be used for lectures. For this purpose a large platform is to be built, under which a space for storage will be provided.

Forty new pieces of machinery have been secured, most of them duplicates of the machines already in use.

The old ship "Copernicus," as it was known to the Technology "gobs," is having old walls torn down and new ones erected in order to house the Mechanical Engineering Department properly. The former Civil Engineering Museum is being subdivided into offices and a laboratory. Other rooms are either being enlarged or made smaller according to the wishes of the department.

The Mechanical Engineering Department feels that this new increase in floor space and equipment will double its capacity, and will materially help it accommodate the increasing number of students in Course II, and its allied courses.

An additional organic laboratory is also being built on the fourth floor of the mining building. This laboratory is to be used by the industrial chemists, unless they finally decide to move to one of the Student Army Training Corps barracks. The south half of Building Three is being made over to accommodate a quantity of new machine tools. This space was formerly occupied by the wood-turning and pattern making shops. The partition between the rooms 13A and 13B is being torn down to make one large drafting room to take care of the increasing number of Naval Architecture students. Various minor office and structural changes are being made in building occasioned by the transfer of Course II to Building One. The mechanic arts shop, which was formerly in Building Three, is being moved to the building on Vassar Street. This latter is the Technology machine shop and has been used for forging and foundry work.

The number of students this year will test to the limit the present capacity of Technology to care for students, the weak places here being in the courses in chemistry. For these temporary provision has been made by utilizing a part of the building devoted to mining and metallurgy and by fitting up one of the remaining barrack buildings erected for the Student Army Training Corps. That chemistry must have a new building for its laboratories by another year is conceded by almost everybody, and even for present overwhelming registration now there will of necessity be crowding.

Those familiar with the allotments of space at the Massachusetts Institute of Technology will find several other changes. One of the most important is the transfer of the offices and class rooms of economics to the building at the corner of the Esplanade and Massachusetts Avenue, under the wing of the Civil Engineering. Here the offices and library are installed, affording more space for English and the languages and mathematics in Building No. 2. To this structure has been transferred the office of the professor of military science and tactics, now with two or three officers to care for the larger cadet regiment. This regiment is larger not only on account of the increased number of students in the freshman class, but because military drill is required now of the sophomores as well as the first-year men. The regiment will therefore have at least sixteen hundred young men under arms.

In chemistry, the former seminar room adjoining the office of Professor W. H. Walker has been arranged for office room for three of the staff with two laboratories. In physics, the offices which were the headquarters of the naval aviation wireless staff, in the northeast angle of the court of honor, have been made over into offices for the staff of physics. Some minor changes in the space of electrical engineering make for more convenient access of the staff to the corps of typewriters and secretaries. The great change is however, in the rearrangement of the machine tool laboratory on the third floor of the building devoted to mechanical engineering. The stock of lathes and machine tools acquired by the War Department for use during the war has afforded to the Institute the opportunity of doubling its equipment. To give this space, the interior partitions of the building have been removed and this department has now a clear hall three hundred feet in length by sixty in width for its lathes and allied machines. These will be fully utilized in the new year with the larger classes and the government students who are to be instructed here.

Plans are well under way to make Walker Memorial one of the most beautiful buildings in this vicinity, both externally and internally. Grass has been planted about it recently, which has helped to bring out its exterior beauty, and now the interior is being decorated with pictures, statuary and plaques, which are to relieve the monotony of the walls, formerly so barren.

So far the reading and trophy rooms have undergone the most complete changes. A large handsome portrait of Frank Henry Rand, former bursar of the Institute, has been placed above the fireplace of the east reading room, in his memory. Other pictures are soon to appear in this room, and in the opposite reading room on the first floor. In the library are many handsomely framed reproductions of well known paintings which are the gifts of several of the alumni, the largest donor being Waldo M. Ross.

Some pictures have already been placed in the Faculty Room along with the busts of President Rogers and Professor Bigelow. The trophy room has probably received the most attention. In its center are two white marble figures which form a striking contrast with the dark trophy cases and furnishings. President Rogers, in bronze, is to be here permanently, while the bronze bust of President Walker is only to be here temporarily. It will probably be put in the niche of the projection booth, along with the bronze pedestal, on which it was displayed in the main dining hall. The walls of the trophy room are being hung with plaques and the photographs of the Technology teams which won them. But these are not the only rooms being decorated. The balconies also are receiving their share of pictures, and even the billiard room is being decorated with former Tech Show posters, neatly framed.

The work of beautification is not to stop here, as many new oil paintings are expected during the next week, and these will be placed in dining halls, where some very good-looking paintings have already made their appearance.

OVERSEAS STUDENTS AT TECHNOLOGY INCREASING

Students at Technology from other countries are more numerous than ever before this year, there being about one hundred and fifty in the new group. There are notable increases in students from Russia, Norway and Spain, the numbers being ten, eleven and five, respectively. England, Denmark, Greece and Turkey are the other countries of Europe well represented at the Institute.

In South America Chile has been a country sending very few students here. A prime reason for this has been the existence of the government universities with free tuition. The advantages of education in the United States have been discovered through the investigations of a number of representatives, and there are now at the Institute seven men from this southern republic.

Colombia equals its best previous record with four, while five other countries maintain the number of last year. Mexico has five men, and three Central-American countries have smaller numbers. Canada has not diminished the number of students notwithstanding the war. The Orient, represented by China and Japan, has some fifty men, a number sufficiently large to form a basis for a Chinese Club in addition to one of Latin-American students and the larger, all-embracing Cosmopolitan Club, with its twenty-five nationalities.

ACTIVE WORK BEGINS ON PRATT MEMORIAL

Naval architecture building will be constructed by Stone & Webster during the winter — will be occupied next fall

THE new home of the Department of Naval Architecture and Marine Engineering is fast becoming a reality, after being struggled and fought over constantly for the past few years. A long stream of carts is kept on the jump by the busy steam shovel, and already the excavation work is nearing completion. Winter is approaching, making it necessary to push things right along as Stone & Webster, the contractors, want the foundation finished this year.

The Pratt Memorial will be completed next spring, and be ready for occupancy next fall. The building is in harmony with the rest of the Institute, being one hundred and seventy-five feet long, sixty feet wide, and three stories high. The main entrance will be similar to that of the rest of the buildings except that it will have a larger lobby. This lobby leads into the Naval Museum, where models of ships will be kept. The remaining floor space will be utilized for offices and recitation rooms. On the second floor will be the model shop, library and aeronautical drafting rooms. More drafting rooms will occupy the top floor which will be lighted by skylights. The basement is to be left empty, pending definite decision as to its use.

At present the latest demand of the heirs of the Pratt estate is still hanging fire, for the decision of the Supreme Court has been postponed until January 1, 1920. These heirs are attempting to gain control of the fund on the ground that Technology has delayed the work of erecting a building. The Priority Board of the United States, however, refused Technology permission to build during the war, and until the restriction was removed, Technology was forced to wait. Since the delay was for only three months, it looks as if the decision by the court would in no manner hinder the work on the new building.

Another factor in the case is that Mr. Pratt desired that his estate be held in trust for twenty-one years, unless before that time a fund of $750,000 should be accumulated. In that event he provided that the sum was to be used " forthwith " for the building of the school. Mr. Pratt died May 7, 1912.

Therefore, since the fund is now nearly $1,000,000 and, as the heirs contend, the Institute has failed to carry out the terms of the will by building " forthwith," the said heirs claim that they are entitled to share in the distribution of the fund. Technology's assertion is that it has fully carried out the conditions of the will, under the recent difficult circumstances.

WRITE YOUR OWN HEAD!

" Supposing his name really were Smith . . . ."

STUDENTS DEMAND TRAINING IN SOCIOLOGY

The following editorial from "The Tech" embodies an opinion that is undoubtedly widespread and growing, concerning the duty of Technology to train its students in the theory and practice of industrial problems, the labor question—in short, human engineering.

IT SEEMS LIKE AN OMISSION

THE remark was recently made from a Boston pulpit that "the principal reason for the present unrest in society in general is the fact that we know so little about how to live together." It is also true that very little is being done to educate the people to their social obligations, and it is a deplorable fact that the Institute is doing nothing to give its graduates an understanding of the fundamentals of sociology.

We are naturally short sighted and our dependence upon the rest of the family of society has far out-distanced our conception of our obligations to them. We still live to ourselves and consider when we go to the grocery, the coal office and the clothing store, that we have visited the prime sources of the supply of the necessities of life, the same as we used to when we dug the potatoes, cut the fire wood, and spun and made up the cloth, and having paid out our dollars, we go home and shut ourselves in.

If the groceries are good and the price reasonable we don't care if they were raised by foreigners whose low standards of living are compelling their good American farmer competitors to give up and move to a city job, or whether the farmer is being cheated by the middleman who controls the cold storage plants and thus can force him to sell cheaply. Clothing, if cheap, causes us no concern as to whether it was made by child labor or as to the living conditions of the people whose very lives go into the making of the garment. Coal, if it burns well, and cost moderately, does not stir in us any thought of the thousands of hands that have helped it along from the mine to the bin. Whether those hands work eight or fourteen hours, whether they hold a book or a pen at night or whether, belonging to an illiterate, they can only serve their owner's physical demands. Or whether the mine owners, who by a stroke of chance possess those natural resources of our earth, in order to make higher profit, are, through prodigal mining, hastening the day when our coal supply will be exhausted, it matters not for us.

We do pause, however, when in our seclusion we are disturbed by higher prices, by the uprising of labor with demands that affect us, and by thrusts in our national pride when we read in the reports of the draft examiners the appalling percentage of illiterates and physically deficients. But after scratching our head with our slide rule, vainly making a scramble through our mental file of formulae and scientific concepts, we Institute men give up and wait for some one else to solve the difficulty.

In short, we have to shirk our social obligation, we do not increase our knowledge of "how to live together," for we are at a loss how to attack such questions as immigration, race riots, family life, city slums, illiteracy, insanity and the many other sociological problems, because they have never received our attention here at Tech, where the demands on our time cause us to draw closer and closer to ourselves, preventing personally initiated study along these lines, and where we are given no organized study in its place. And we finally graduate, a trained individualist, but four years behind the times in social and economic conceptions.

It seems almost a dangerous omission in the curriculum of the Institute that some course in Sociology is not required, to give to its engineers, who must all soon shoulder heavy social responsibility, a basis for an intelligent grasp of the framework of our social structure.

Up to the present time, Technology students have pursued their work at the Institute with little or no regard to outside affairs such as labor questions and politics—matters which they must deal with when they enter upon their industrial work. The academic aspect of the labor question has been given to the men in the Engineering Administration Department during their third year, but no attempt has ever been made to present up-to-the-minute, present-day industrial problems, such as are now holding the interest of the whole country. However, pressure has been brought to bear upon the Transition Committee of the Faculty so that they have arranged for such a course, which will be offered next year as one of the third year options. The Economics Department will present this course and it will be taught by Professor Doten, who has had considerable experience with labor matters, especially during the war, while he was in the employ of the government.

This is a step in the right direction, nevertheless we do not wish to let matters stand. These are problems about which every Technology student should be thinking and forming opinions during his four years of training. Such matters are constantly changing and such movements as underlie the labor situation, Bolshevism, Socialism, Nationalization and Government Ownership of industry, take tremendous strides in the course of a single year. Their significance cannot be understood by a brief study such as could be offered in an optional course of a term's duration. We feel that the importance of such problems warrants their being offered to all students in the upper classes. Rather than have the course represent the opinions and experience of a single man, we believe that men prominent in this field outside of the Institute faculty should be invited to present their side of the question to the students. By this we mean that we would like to see the side advocated by organized labor explained to the students as well as the side taken by the industrial interests, employers and capital. There is no doubt that the time has come when all believe that the technical school should send out men better informed on business and industrial affairs. We believe such a course will do much to accomplish this purpose.

KNIGHTS OF COLUMBUS SCHOLARSHIP MEN CHOOSE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Over two thousand applications have so far been received by Supreme Secretary William J. McGinley of the Knights of Columbus at the New Haven, Conn., headquarters of the Knights of Columbus, for the one hundred scholarships offered by the Knights to American veterans of the war. By mail from every state in the union and by telegraph from the far west and the Pacific coast, ambitious ex-service men of all denominations are entering their names in the race to secure a full course of higher education in one of the forty-one universities and colleges selected by the Knights.

Fifty per cent of the applicants desire courses in some form of engineering, the majority of them selecting Massachusetts Institute of Technology.

THE INSTITUTE AND THE POLICE STRIKE

Technology finds work of its own to do — what the Transcript says

THE Boston "Evening Transcript" of Friday, September 19, comments editorially on the work of Technology men in assisting as emergency firemen in the police strike as follows:

"The Massachusetts Institute of Technology has just given to the citizens of Boston and New England a striking demonstration of its potential usefulness to the community. The preparedness of the Institute in making certain that no such disastrous results would follow a possible firemen's strike as had already followed the police strike, is a story of right service, rightly applied. Fortunately the firemen were of sensible mind and handled their situation themselves in admirable fashion with an outcome of greatest credit to them. But there were moments when no one knew just what was coming. There was the rumble of strikes in the air.

"It was on Thursday afternoon, while President Maclaurin was inspecting some of the Institute's new construction work, that he received the appeal for help. After a conference with representatives of the mayor, Technology men were quickly summoned and a plan of action was evolved. This plan was to assemble an emergency fire-fighting force against possible needs. The recent war has shown the value of the Institute in emergencies. Its splendid equipment was helpful in fitting aviators for their duties in army or navy. Its engine laboratories trained thousands of men for special work and the graduates of the schools of the United States Shipping Board have done yeoman service in officering the steamships of the country. In this work Technology, with its equipment and its skilled teachers, was able to take good material and in a few weeks give the men the special training that would fit them for new duties. It very quickly transformed a locomotive engineer into one competent to officer the engine room at sea.

"This was precisely what was done in the emergency fire brigades. With fire engines to practice with the flexible instructing staff of the Institute was able in a marvellously short time to transform men with a license, perhaps, for some other form of engine, into men able to manage the special kinds of engines used in fighting fire. It is to Technology's credit that in forty-eight hours there were assembled and passed by its examiners no less than six hundred men who were competent to manage the engines or handle the hose in case of need. While Boston citizens were uncertain of the future, their safety was already assured against any contingency by these hundreds of men ready on call to do efficient service.

"There were a number of splendid factors co-operating in this work of precaution. The First Motor Corps was transformed into good firemen. Engineers offered their services and old firemen from other districts came forward to be counted. And they came in sufficient numbers to assure against risks of any conflagration. To these men the greatest praise is due, and they should receive it in unstinted measure, but the co-ordinating force, the technical skill and experience and the ability to put this into instant practice, that was Technology's. It was another service that this school has been able to render the community. The motto of the Institute, 'Mens et Manus,' may be liberally translated into 'Preparedness,' for that is what the combination of quick minds and skilled hands effects. To this the Massachusetts Institute of Technology has always added 'service' and it has here shown in practical fashion how it is ready instantly to come to the aid of its city and the State, to whose citizens it must look for support."

DISTINGUISHED SERVICE MEDAL FOR COLONEL WALKER

Colonel William H. Walker, head of the course in Chemical Engineering, has received the Distinguished Service Medal in recognition of the work which he has performed in the Chemical Warfare Service during the war.

In 1917, Professor Walker left the Institute and was commissioned in the chemical section of the army, with the rank of lieutenant-colonel and in charge of the section. In this capacity, he served for almost a year and was markedly successful in organizing the predecessor of our Chemical Warfare Service of today. The chemical section and other closely allied divisions were united later to form the service as it now exists.

In January, 1919, Colonel Walker was asked to take charge of the government's shell-filling and manufacturing plant at Gunpowder Neck, Maryland. This plant was established in 1917 for the purpose of concentrating the manufacture of the poison gases in one locality, for it was found that independent producers could not ship the gases satisfactorily. The plant became known as the Edgewood Arsenal and was a separate part of the Ordnance Department. At it were produced chlorine, phosgene, chlorpicrin and mustard gas, and it also had facilities for filling shells with these materials.

When Colonel Walker took charge, having been transferred to the Ordnance Department and sent as commanding officer of the Gunpowder Neck Reservation, affairs at the plant were not progressing at all well, but under his leadership the project was brought up to a high standard of efficiency in spite of the fact that the railroads of the country went to pieces at this time and it was only by heroic measures that raw materials could be secured and the finished products moved to their destination.

Edgewood Arsenal, as Gunpowder Neck is now called, was withdrawn from the Ordnance Department and made a part of the Chemical Warfare Service in July, 1918. Major-General William Sibert then assumed command and Colonel Walker was transferred to the Gas Offense Division of the Chemical Warfare Service. This branch had charge of the production of gas, containers and other material for use in offensive gas warfare. He held this position until his release from the service.

Without doubt, Colonel Walker's decoration is a well-deserved one, in view of the tremendous importance attached to the maintenance of adequate gas supplies for our troops.

WORDS WORTH A MILLION!

Lieutenant Dinsmore Ely, '18, wrote home just before he died. " It is an investment and not a loss when a man gives his life for his country." He directed that if he fell his life insurance should be used to buy Liberty Bonds.

In the Fifth Loan drive in Chicago on " Dinsmore Ely Day " a million dollars' worth of bonds were bought by those alone who vowed to equal Dinsmore Ely.

" Mr. Smith " says: " Four millions to match your four millions! "

Chicago made good for Dinsmore Ely. Technology must make good for " Mr. Smith! "

COURSE IV MAN A WAR ARTIST

The following note from the "Portland Oregonian" should be of interest to many men of 1913, 1914, and 1915, as Louis Rosenberg was a special student in those years very prominent in Course IV. He was the winner of the travelling scholarship offered by the department of architecture in 1914.

"Sketches of battle scenes and interesting portions of the American sector done at random, many times from a bit of clever camouflage almost directly under the enemy's eye, are among the interesting souvenirs belonging to Louis Rosenberg, camoufleur with Company B, 40th Engineers. Mr. Rosenberg was an instructor in architecture at the University of Oregon prior to his enlistment, and the opportunities that befell him to view the ancient cathedrals and castles of France were of much interest to him.

"Every nook in his travels that would tempt his artist's eye instantly became the subject of a hurried sketch, perhaps on the back of an envelope or on a scrap of paper, which at his first leisure moment would be transcribed in pen and ink on drawing paper.

"His collection of finished sketches, which number forty-three, has lately been exhibited at the University of Oregon and will be on view at the Portland Art Museum some time next month. The group includes impressions of Baccarat, Luneville, Verdun, St. Mihiel and other places and were all done during the artist's six months of active service at the front. The 40th Engineers plan to publish a book of the work of illustrators of the regiment, and some of Mr. Rosenberg's sketches will be submitted for the edition. Architectural publications and art magazines also have asked for the sketches, promising a wide circulation of the first hasty little drawings done under German fire. The pen and ink work as it stands now later will be used by Mr. Rosenberg as subjects for drypoint etchings.

"Several of the sketches will be reproduced in an early issue of the 'Architectural Journal' and the editors plan to publish the whole series in booklet form.

"The camouflage section of the United States army, which seldom numbered more than two hundred men on active duty, was divided into units of ten men each. Each unit was attached to a division to work with firing batteries. Mr. Rosenberg's unit was attached to the 65th Field Artillery for a portion of the time."

DECEASED ALUMNI

The following is a list of those recently deceased:
Edmund Grover, 1877
James L. Belser, 1888
Marion K. DuBois, 1898
Henry C. Wagner, 1905
Harold S. Libbey, 1906

MISCELLANEOUS CLIPPINGS

From a Chemical Journal

T. Coleman duPont, a Course III (Mining Engineering and Metallurgy) '84 man of the Massachusetts Institute of Technology, is head of a body of graduates, friends and officers of this institution who as an Endowment Fund Committee are directing a nation-wide drive for an endowment fund of $10,000,000. An anonymous donor, already notable for previous benefactions that made possible that monumental plant on the banks of the Charles, has contributed $4,000,000 conditional upon a like amount from other sources.

The necessities of this wonderful institution to which American industry owes an unescapable obligation direct public attention to the present plight of professional technical education in this country. Industrial expansion by the lure of greater rewards has depleted instructing staffs. Economic conditions affecting all of us not only reduce the supporting power of present endowment but make necessary added cost of instruction which largely is gratuitous; thus to a serious degree depriving young men of technical professional education.

American industry should take to heart the significance of these conditions.

Capable men must be attracted to the work of technical instruction and to the work of research fostered by these institutions. The cost of such instruction must not be allowed to become prohibitive to ambitious youth, or its benefits permitted only to a class, or its results reduced in quality. More than ever in the past will our leaders of industry be technically educated men.

Industry must regard her response to appeals of this character as a premium on the insurance of her stability.—The Chemical Age.

Army and Navy Journal

The campaign for a $10,000,000 endowment fund which Massachusetts Institute of Technology has just opened has brought out a number of interesting facts in the Institute's war record. Of the twelve thousand graduates three thousand were in actual service. Of these seventy per cent were officers. This record contrasts well with Harvard's forty-seven per cent. In addition two thousand more Tech men held responsible positions in the industries mobilized for government work. Hog Island, the home of the American International Shipbuilding Corporation, the largest shipbuilding plant in the world, was built, manned and officered by Tech men. The government poison gas plant at the Aberdeen proving grounds was built and operated throughout the entire period of the war by Professor William H. Walker of the Chemistry Department at Massachusetts Institute of Technology, colonel in the Chemical Warfare Service. At Technology itself the whole plant and equipment were given over to the government service. Five schools in aviation alone were opened and they, together with the schools in other branches of the Service, provided special training for nearly seven thousand officers of both the Army and Navy. The Institute also took a leading part in organizing and conducting the training of eleven thousand officers for the Shipping Board. The largest tank in America was built on the Technology grounds in less than three months—record-breaking time. It was designed by Professor E. F. Miller, '86. In the school of Aeronautical Engineering airplanes were designed and built by the students themselves. Now that the war is over Technology is planning to enlarge her facilities so that she can take care of the greatly increased number of men and women who are seeking technical training. Fifty per cent of the two thousand applications already received for the Knights of Columbus scholarships offered to American veterans of the Great War are for technical courses, the majority choosing Tech. This is only one manifestation of the wide interest in engineering that the war has awakened in the young men of our country. Technology hopes to meet this demand for technical training by a much needed $10,000,000 endowment fund to be applied to the improvement of her laboratories and teaching force.

"Mr. Smith" Once More

Returning from New York after a conference with leading alumni of the Massachusetts Institute of Technology as to ways and means for raising an endowment fund of ten millions, President Maclaurin has some interesting things to say. Comparing the present condition of unrest and upheaval with the situation just following the Civil War, he very properly remarks that "economists know thoroughly well that the high cost of living is to be alleviated only by more rapid production," and "that this in turn depends on highly trained technical men." This he declares is the "fundamental reason why the Institute is calling on Massachusetts men to come to its aid." For the large gifts have heretofore come from friends of the school in other parts of the country. The mysterious "Mr. Smith" who offers another four millions is said "not to be a Massachusetts man," while Mr. duPont, who has given a million, is at home in Delaware. In almost every department the need for enlargement is imperative. Just how exacting the studies are is shown by the statement that the students "are expected to work within the ten-thousandth of an inch." If these new millions are raised—and no one doubts that they will be—the plans made when the Institute removed to the banks of the Charles will be realized in spite of the action of the Supreme Court upon the merger with Harvard and the loss of the co-operative use of the McKay bequest. "Mr. Smith's" munificent offer gives just the impetus which is needed at this time.—BOSTON HERALD.

Re-assured

The latest promise of a $4,000,000 gift to the Massachusetts Institute of Technology—made by the "Mr. Smith," who, if the thing be possible, is slightly harder to find even than one of the tribe, with all initials supplied, in the city directory—means something more to the Institute than an intangible prospect of bright future development. It means, or should mean, that the Institute no longer need stand in any danger of suffering, at this time, an arrested development—a check upon those carefully thought-out and consecutive plans for the school's future which were framed when the school first occupied its great new plant on the Charles, and when the anticipation of co-operative use of the McKay funds dangled before it.

Care had been taken by Technology's officials, the alumni were assured when the Supreme Court disallowed the merger with Harvard, that the Institute should never bank on these funds in such way as to involve it in liabilities if the money did not become available. But obviously the Court's decision closed the door upon large new assets, and, for the time being, upon the future which they might have builded. The new "Smith" promise is the recertification, then, of the success of the plans for development which Technology had so far-sightedly laid, and as such it is something much more than the mere proffer of funds for an object bright but visionary and unknown.

With such good to be won for their institution, it is impossible to believe that the alumni and friends of Technology will risk any loss of it. They will set themselves heartily to the task of raising the other $4,000,000 fund which is the condition of the Smith gift, and also the extra $2,000,000 desired as a special premium, and they will succeed in their efforts to secure the money needed.—BOSTON TRANSCRIPT.

Duplicated Education

The Harvard Engineering School which begins its career with the opening of the present academic year represents a legal rather than an actual necessity. The school has been founded to use the income from the Gordon Mackay bequest which was made to foster scientific education at Harvard.

About ten years ago Harvard and the Massachusetts Institute of Technology devised a plan by which they thought to satisfy the terms of the bequest without duplicating the excellent plant which Technology already had in Cambridge. It was provided that the faculties of the two institutions should so co-operate that Harvard men could get a graduate degree by work at Technology, while Technology men would be privileged to take courses at Harvard for which they would receive credit at their own school.

The plan was working out very well, and several classes had been graduated under these conditions when the Massachusetts Supreme Court, being appealed to by some of the heirs of Gordon Mackay, stepped in and ruled that the University had no right to use the Mackay funds in co-operation with Technology. The decision, which was greatly regretted by both institutions, meant that the "entente cordiale" had to be abandoned, and the agreement dissolved.

Although the Harvard Engineering School may in time develop into one of the great scientific schools of the country, it is apparent that its establishment involves an unnecessary duplication of effort. Under the "Tech agreement" the two institutions were on the way to becoming virtually the center of scientific and technical education in America. By working together they would have been able to procure the finest faculties and equipment in the world. Because of a court decision they will have to work separately with a consequent loss of efficiency and prestige. There are cases in which courts by their stickling for technicalities succeed in retarding progress. This looks like such a case.—HARTFORD COURANT.

Tech and Chemistry

Mr. Arthur D. Little, the president of the American Institute of Chemical Engineers which is now meeting in Boston, hit upon an idea of much truth and aptness when he said to the Institute in his address of welcome: "Though the number of chemical engineers in Boston is few in comparison with such great centers of the chemical industry as Niagara Falls or Pittsburgh, the whole profession recognizes Boston as a focus of opportunity for those young men who, in rapidly rising numbers, seek the highly specialized education required to fit them for what is, in some respects, the most comprehensive and exacting of all professions." In so referring to Boston's facilities for the training of expert chemists, he had in mind the fact that the laboratory method for the teaching of chemists had its first introduction, in the New World, at the Massachusetts Institute of Technology, and that the lead so established has been maintained ever since. The moment the laboratory method itself began to seem insufficient to the needs of preparation for chemical engineering, Technology hit upon the plan of direct industrial contact provided by the new school of chemical engineering practice which takes its students, at the proper periods in their training, to the very place and scene of large chemical industries for first-hand and collaborative work.

If academic institutions, situated in Greater Boston, have shown this enterprise in developing the training of men for high place in chemistry, certainly a like degree of initiative on the part of business men of the community, in building up the chemical industries located here to a point that would make increased capital of these Boston-trained men, might well be expected.—BOSTON TRANSCRIPT.

TECHNOLOGY SOLDIERS STUDYING IN ENGLAND

(This list was dated June 3, 1919)

OFFICER IN CHARGE of American Student Detachment in Great Britain, Colonel F. F. Longley, 1904.

OFFICERS

LT. A. W. BUFORD, 1917 B. S., Oxford University.
LT. J. W. DOON, B. S. 1917, University of London.
LT. JOHN HARPER, B. S. 1917, Cambridge University.
CAPT. R. B. HAYNES, B. S. 1913, Cambridge University.
LT. AUSTIN KUHNS, B. S. 1917, University of Manchester.
MAJOR A. J. MYER, JR. 1906-7, Oxford University.
LT. VAN COURT WARREN, B. S. 1910, University of Edinburgh.
LT. D. B. WEBSTER, B. S. 1916, Trinity College, Dublin.
LT. LEYLAND WHIPPLE, 1900-03, University of London.

ENLISTED MEN

PVT. K. R. BRIEL, B. S. 1913, University of London.
PVT. GATES BROWN, B. S. 1915, University of London.
SGT. 1ST CL. K. M. CHILDS, B. S. 1917, University of London.
SGT. C. COBB, JR. 1917-18, University of Manchester.
SGT. J. W. MURPHY, 1915-16, Trinity College, Dublin.
SGT. R. B. SMYTH, 1914-16, University of Manchester.
CPL. H. P. THOMAS, 1912-14, University of London.

IN THE PUBLIC EYE

ROGER W. BABSON, '98, has introduced a novel system of education in connection with Babson's Statistical Organization. There will be started October 1, at Wellesley Hills, a new school which will train men exclusively for executive positions in business. The course, which will be eminently practical, is designed for young men who, through inheritance or for other reasons, expect to fill responsible positions demanding trained executive ability of the highest order.

The method of instruction will be as unusual as the conception itself. At the start the student will be taught to work as an executive must work, intensively and efficiently. He will spend eight hours every day working on and solving current problems, absorbing the while the underlying basic principles. Business cycles and fundamental statistics as a basis for forecasting trends will naturally receive attention. Instead of lectures the student will be given references and practical problems taken from everyday business. The class hour will be spent with a practical expert in a discussion of the various solutions much as they would be discussed in an executive meeting.

The work will be divided into four departments or sections as follows: Economics and commodities, business finance and care of property, management of men and personal relation and efficiency.

To develop a competent executive in two years, as it is planned to do, constant and thorough personal work with the instructor will be necessary. For this reason the course will be open to a limited number; in fact, there will be an average of one instructor to every student this coming year.

ALBERT FARWELL BEMIS, '93, president of the Bemis Brothers Bag Company of Boston, represented the interests of the American employer on a commission recently sent abroad by the National Civic Federation to study industrial conditions during the reconstruction period and to report on any measures employed for bringing capital and labor into closer and more harmonious relations, or for the exclusive betterment of labor, that might be deemed worthy of adoption in the United States.

Mr. Bemis has for many years been a member of the Board of Government of the National Association of Cotton Manufacturers, and was president of this organization for two years. He is also treasurer of the National Council of American Cotton Manufacturers, and a member of the National Industrial Conference Board. He is a graduate of the Massachusetts Institute of Technology, and has given special study to the subjects of industrial relations and housing.

FRANK GELETT BURGESS, '87, who was graduated from Technology in the course in civil engineering, is the author of a "Series of Brilliant Satires on the Rampageous Sex," which is appearing in the current issues of "Judge," the weekly humorous periodical. The series details the adventures of one Angela Bish of the six-cent store. It begins with a description of her personal charms, if such they may be called, and her attachment for a youth clad in a plaid suit with purple spots. It is a clever piece of satire upon the gum-chewing girl and the lounge lizard of today.

guaranteed to furnish the tired engineer with two pages of chuckles. Burgess will be remembered for the Tech songs which he wrote while he was at the Institute, copies of which are kept in the main library, together with cartoons which illustrate these songs.

VAN RENSSELAER LANSINGH, '98, formerly general manager and chief engineer of the Holophane Works of the General Electric Co., Cleveland, and later manager of the Holophane Sales Department of the National Lamp Works of General Electric Co., Nela Park, Cleveland, has been elected president of The Lunken Window Co., Cincinnati, Ohio. This company manufactures a unit window consisting of window frame, disappearing sash and fly-screens. The upper and lower sash telescope into a window box above the usual window opening, making it possible to secure maximum ventilation from the entire window opening at the same time screening from top to bottom. Mr. Lansingh entered the University of Chicago in 1892, graduated January, 1896. From February, 1896, to June, 1898, he attended the Massachusetts Institute of Technology, receiving the degree of Bachelor of Science in electrical engineering. In February, 1899, he entered the testing department of the Western Electric Co., with whom he remained until July, 1900, when he formed the V. R. Lansingh Co., in Chicago, sales agent for Holophane reflectors. In September, 1904, he was appointed general manager and chief engineer of the Holophane Works of General Electric Co. and in March, 1914, became manager of the Holophane Sales Department of the National Lamp Works.

In August, 1914, Mr. Lansingh resigned that position to start in Chicago, The Hardware Buyers' Association, which later became the By-Lo Stores Co., operating a chain of hardware stores at Muncie, Frankfort and Anderson, Ind. The advent of our entering into the world war prevented the expansion of this chain and consequently, in March, 1917, he entered as a volunteer in the Council of National Defense at Washington, D. C., serving under Dr. Hollis Godfrey, one of the advisors of this Council. He continued work along different engineering lines until June, 1917, when he sailed for France to represent Technology, which was later consolidated with the American University Union in Europe with headquarters in Paris and with branches in England and Rome. For a year he served as a director of the Technology Bureau in the Union and also as business manager and assistant director of the organization, whose purpose it was to serve college men and friends in service abroad and to promote closer relationship between American and foreign universities. In July, 1918, he returned to the States and in October was placed by the Government in the Metz Plant at Waltham, Mass., as works manager for the Government. He continued in this capacity until April, 1919, and in June became president of The Lunken Window Co., Cincinnati, Ohio. Mr. Lansingh has been prominent in the activities of the Illuminating Engineering Society, having been its general secretary in 1906, and president for the term ending in December, 1912. He has also served the society in other offices and on committees, and has been closely identified with the advancement of scientific principles concerning the use of reflectors of light sources. In collaboration with J. R. Cravath he wrote a book, "Practical Illumination," which has had a very wide circulation and is not only in the library of every man interested in lighting, but has been used extensively as a text book in many educational institutions.

E. W. ROLLINS, '71, was born November 25, 1850, at Concord, N. H., was graduated from the Concord High School, and from the Institute in the class of 1871. In 1876 he went to Denver, remaining there until 1889 and organizing here his present business. He was instrumental in building up the Denver Electric Light properties. The firm of E. H. Rollins & Sons now has offices in Boston, New York, Chicago, Philadelphia, Denver, San Francisco and Los Angeles, and small offices in other cities, dealing in municipal and corporation bonds.

Mr. Rollins spends his winters in California studying hydroelectric properties there, which his firm has been largely instrumental in financing.

He has an attractive home in New Hampshire—Three Rivers Farm, at Dover, with six hundred acres of land, two hundred acres of which are under cultivation. Ask any Technology man in New Hampshire or Maine about Three Rivers Farm, and they will tell you of the wonderful outings which they hold there every year, with an all day celebration which is an event to be remembered. The farm is at the junction of the Salmon Falls and Cocheco Rivers, with six miles of waterfront. It is one of the most interesting places in the White Mountain State.

Mr. Rollins belongs to many clubs including the Boston Press Club, the University Clubs of Boston and New York, the Brookline Country Club, the Denver Country Club, the Denver Club, the Denver Athletic Club, the Midwick Country Club of Los Angeles, the Technology Club of New York and is president of the Technology Club of New Hampshire. He is also a member of the Alumni Council and a member of the Corporation of the Massachusetts Institute of Technology.—BOSTON EVENING RECORD.

W. H. TIMBIE, who is well known for his teaching in vocational subjects and for his important list of books relating to electrical engineering and applied electricity, has been appointed associate professor of electrical engineering in the Massachusetts Institute of Technology. Mr. Timbie was graduated from Williams College in 1901 with honors, being high in the list of Phi Beta Kappa. During his college course he prepared for teaching and shortly after graduation became a teacher of applied science at the Pratt Institute in Brooklyn. Upon the establishment of the Wentworth Institute in Boston he became head of the Department of Applied Science in that institute. During the past year he has been editor-in-chief of the Committee on Education and Special Training in the United States War Department at Washington. He is joint author with Professor Higbie, of the University of Michigan, of a well known book on alternating currents and himself is author of a book on practical electricity and other books relating to electrical engineering, which are known and used throughout the world. Certain of these books have been translated into foreign languages. Mr. Timbie is a member of the American Institute of Electrical Engineers, the American Society of Mechanical Engineers. He has been active in the National Educational Association and has memberships in other engineering and educational societies. At the Massachusetts Institute of Technology his principal duty will be the supervision of the co-operative course in electrical engineering which is carried on in association with the General Electric Company. This course is arranged so that the students receive a scientific training of very high order in electrical engineering at the Institute and associate with this a training in manufacturing methods and shop management and industrial research at the works of the General Electric Company. Mr. Timbie's marked success as a teacher and his enthusiasm in such work assure great success in his new position.

MAYO TOLMAN, '13, XI, chief engineer and director of the division of sanitary engineering of the state department of health since the division was formed four years ago, has resigned his position because of his increasing private interests in the engineering profession. His resignation takes effect September 1.

The division of sanitary engineering was organized in July, 1915, by Mr. Tolman, who came to Boston from Maryland, where he served as engineer for the state health department. He was born in Massachusetts and is a graduate of the Massachusetts Institute of Technology, with the degree of bachelor of science.

Mr. Tolman was instrumental in organizing the West Virginia Engineers' Association, the original idea of forming a club having been formed by him and Gardner S. Plumley. He now acts as secretary of the association.

Since he came to Charleston, Mr. Tolman has been connected with various civic and community movements and had charge of different investigations of the water situation. After the epidemic of typhoid fever in 1917, he became chemist for the water company, resigning a short time ago to devote all of his time to the practice of sanitary engineering.

Mr. Tolman is considered one of the best sanitary engineers in the country. He was appointed engineer and bacteriologist by the American Red Cross Relief Commission which took charge of reconstruction work after the earthquakes that devastated Guatemala, having been granted a leave of absence by Governor Cornwell at the request of the Red Cross. He was also offered the position of chief engineer of the Syrian Relief Commission for work in Syria and Armenia, which he declined. He was commissioned chief sanitary engineer for the Trans-Siberian Railroad and still has the offer under consideration, but will probably decline it, he says.

The reason of his resignation is stated by Mr. Tolman to be because of numerous private activities. He could not carry on all of his work and he decided to resign his position with the state department of health.

Besides being connected with the firm of Pierce & Tolman, Mr. Tolman is an editorial assistant of the "American Journal of Public Health," member of the American Public Health Association's committee appointed to study improved methods of pasturization of milk; chairman of the water works committee of the same organization; chairman of the New England Water Works Association's committee on the standards of purity for water.

He is also an active member of the following organizations: American Society of Civil Engineers, American Water Works Association, New England Water Works Association, American Public Health Association, American Academy of Political and Social Science, American Society for the Advancement of Science, and American Statistical Society.

Mayo Tolman has just been appointed national director of health of the Community Councils of National Defense, and will act as president of the body until about December 1, or until Dr. Albert Shiles, the president, returns from Los Angeles. Mr. Tolman has accepted the appointment and will leave here the first of September for New York, where his headquarters will be located.

As director of health in the Community Councils of National Defense, Mr. Tolman will have charge of the reconstruction program being planned for the benefit especially of returned soldiers, sailors and marines. The health work of all the community councils throughout the country and hundreds of others that are being contemplated, will be under his direction. He will act as president of the body only until the return of Dr. Shiels.

NEWS OF ALUMNI ASSOCIATIONS

NEW YORK—THE TECHNOLOGY CLUB OF NEW YORK.—The officers of the Technology Club of New York for the year 1919-1920 are as follows:

President, Lester D. Gardner, '98; vice-presidents, F. E. Foss, '86, H. P. Farrington, '07, William A. Evans, '04, Schuyler Schieffelin, '90; Treasurer, Frank P. Montgomery, '02; assistant treasurer, Gorham Crosby, '05; secretary, Frederick Mathesius, '02. Governors, Gaylord C. Hall, '96, George I. Rhodes, '05, Ralph N. Whitcomb, '05, K. Spaulding, '89, Everett N. Curtiss, '98, Noel Chamberlin, '04, F. B. Cutler, '98.

INCREASING POPULARITY OF THE FACILITIES OF THE TECH CLUB. The clubhouse in Gramercy Park was certainly popular during the war and due to the fact that nearly all men in service went through New York the facilities of the club became more widely known. New York has been crowded for some time past and at the present writing it might be said that it is more crowded than ever before. It is next to impossible to get accommodations and the prices charged for anything offering appear to be without reason. The city has its normal increase in population and in addition a larger than ever transient traffic. Due to these facts and also to the slacking off in building operations for the past two years a condition has come about where it is extremely hard to get rooms in the hotels.

The club has been a boon to the returning men in service. Many of them have stopped here for the first time on their way overseas, and they have all enjoyed a welcome home on their arrival in New York again. During the war the house committee converted both the billiard room and the card room into dormitories and in this way a man is always able to secure a bed at any time even if he is not able to get a room. To men who have spent months in all kinds of billets abroad the Tech Dorm at the club is a real classy billet and the men enjoy the comfort and the surroundings, as well as the conveniences that they could never have at the hotels under the present conditions in New York. The house committee has also made arrangements with the Army and Navy Club which is next door to extend the courtesies of the club and many a night finds the excess Army and Navy men in the Tech beds and vice versa. The Army and Navy Club have shown fine co-operation and have opened their squash course and bar to members of the Tech Club without additional expense.

The club is the most reasonable place for any Tech man to stop when he is in New York. There is no need to feel that he cannot get accommodations at any time. The idea of the committee is to make everybody " comfy " and the number of former visitors that return here on their visits to New York shows that they are well pleased with the facilities that the club offers. The housing proposition has been solved well and an idea of its worth is obtained when the figures show that two thousand beds have been slept in since August 1. The idea is

"WHEN IN NEW YORK SLEEP AT THE TECH CLUB"

RESTAURANT SERVICE. The service of the restaurant has come in for its share of appreciation by the resident and visiting members of the club and their guests. Excellent meals and service are always obtainable and at a very moderate charge. The high cost of living has struck all parts of the country, but New York has had a real shock as far as prices of foodstuffs were concerned. The usual prices of nearly all restaurants have been doubled and it seems at times that the service and the quality have become poorer. The club's restaurant has come to the rescue well. The meals are well balanced and most reasonable. A la carte service and regular fixed prices are in effect at all meals. Lunch is especially popular and one is able to make the club and really enjoy a wonderful meal at a reasonable price and get back to business in better time than if one were to wait and go through with the service of downtown restaurants. The outside pergola dining became very popular during the summer months and it is only recently that it has become cold enough to transfer the dining to the inside dining room.

It is desired that the attention of all the New York Tech men be brought to the dining room service. It is most reasonable, clean, quiet, and excellent dining and a distinct loss to those who are not in on the gathering — especially each noon when more men are able to get around. There is no comparison that can be made in which the dining at the club will not show up better than at any outside places and besides the fact that a good crowd of Tech men are there there is the burning fact of the day that the high cost of living gets a real jolt each time one eats at the club.

"WHEN IN NEW YORK EAT AT THE TECH CLUB"

"GIVE AND GET"

THE TECHNOLOGY FUND NEW YORK MEETING. The opening gun of a rolling barrage for the fund drive all over the country went into action with an "H" hour of eight P.M., on October 13, 1919. It was a holiday in New York but a large crowd of Tech men were present to greet the speakers. President Maclaurin, General duPont and Mr. King put on a real "show" and the big gun named "Mr. Smith" made "big Berthas" look like small stuff. The meeting was a real enjoyable Tech one and with a wonderful purpose. The idea was presented with speed and vigor by people who showed determination to do their work well and to fasten on each Tech man the duty and honor which he has in the "Give and Get" movement.

Mr. William H. King, '94, chairman of the New York District for the fund, after being introduced by Mr. L. D. Gardner, '98, president of the club, took charge of the meeting and outlined the ideas which he had for the working of the district under his command. He was sure that it was certainly up to New York to equal the Boston subscription and there was little doubt left in the minds of those present that, under Mr. King's direction, this would be done. He had already begun with emphasis on the "Get and Give" plan and the first of January will surely see that his work and tactics have "put it across" as well as "over" on the Boston crowd.

General duPont spoke briefly, giving great praise to the Institute for the work it had done in the war. He outlined the business man's idea of the fund and its need and made clear that it was simply a business proposition that the famed work of Tech could not be continued in the future unless the necessary amount was subscribed. General duPont showed how tempting the offers were from outsiders and especially from business concerns and that unless the Institute were able to make much needed increases to the teaching staff there was great danger of irreparable losses in the instructing staff.

President Maclaurin told just why the drive was on and of the things it meant for Tech now and in the future. It was made clear to all that even with the increased tuition fees it costs the Institute $500 a year in excess of the amount paid by each student. This means that by the time a student has graduated some one has paid around $2000 for his education in addition to the amount that he himself has contributed. The registration this year at the Institute is larger than ever and considerable work has been done to take care of the extra load. Technology is more popular than ever and it looks well for the future. This future is what is to be guarded by the fund. Because of the drain on the available funds of the Institute due to the increasing costs of education and because of the fact that the time has come when additional compensation must be made to the teaching forces, it is evident that a heroic defense must be made of the ground we are now on by providing the amount necessary to carry on the programmes now planned. President Maclaurin showed how all colleges were on a drive for funds but in no case was there any such start made as the Institute had with the amount to come from "Mr. Smith." He urged that no one hold back because of the fact that there was such a generous offer because it has been shown in all drives that the last few hundreds are much harder to get than the first thousands. The president showed all confidence in talking of the results and the "morale" of the New York attacking forces was left so high that it looks bad for the laurels of the Home Guards of the Boston Division.

George Gibbs was one of the visitors at the club last month. Gibbs recently returned from abroad and quite a few of the overseas men around the club had called on the Tech Bureau in Paris while Mr. Gibbs was in charge. Thanks are due and generously given to Mr. Gibbs by all who were fortunate in getting to Paris and the Tech Bureau while he was there. Every little wish that could be filled by his co-operation was gladly taken care of and the men in the field in both France and Germany are loud in their praise for Mr. Gibbs' work and the wonderful help that the Tech Bureau in Paris was to them during their stay in Europe.

Word was received at the club on October 5 from G. R. Heckle, '99, telling of the death of "Don" Kemp at Montreal:

"The many friends of Donald Kemp will be greatly shocked to know that he died early this morning after a short illness of about a week here in Montreal.

"He had every possible care and attention during his illness and his mother and father were with him at the end."

Mr. Kemp was in the class of 1912 at the Institute and a very popular member of the club. The sympathy of all here who knew him goes out to his family.

THE TECHNOLOGY POST OF THE AMERICAN LEGION FORMED. The Technology Post was formed during the recent "National Drive for a Million Members" on the part of the American Legion. About fifty men assembled at the Technology Club for luncheon on September, 1919, and afterward in a short, snappy meeting a constitution was adopted and the necessary officers elected. It is expected that the Post will increase rapidly in number and that those Tech men who were not able to be present at the launching of the movement will get into touch with the secretary as soon as they can do so in order to bring the strength of the Post to two hundred by the end of the year. The Technology Club of New York had two hundred ten of its members in the military service of the United States and it is expected that every one of these will join the Technology Post. In addition there are other Tech men constantly in touch with New York and an invitation is extended also to them to join the Post if they are not already members of the Legion in other cities. The membership is of course open to all who were in the military service of the United States at any time in the period, April, 1917 to November, 1918. The following men have already signed up at the headquarters of the Post and any one whose name does not appear on this roll can be added by simply dropping a line to the secretary of the Post, 17 Gramercy Park, New York City:

F. W. Barney, John Solomon, Otto C. Lorenz, Frank Gilbreth, G. R. Wardsworth, D. F. Piza, J. W. Hines, Paul Leonard, Theodore H. Skinner, Leroy H. Byam, H. L. Marion, T. F. Spear, Jr., E. F. Lewis, C. V. Handlin, M. Lewis, J. J. Strachan, James M. Evans, John M. DeBell, Edward P. Brooks, L. D. Gardner, R. S. Rankin, F. J. Friedman, R. Beaver, William de Yong Kay, James A. Tobey, H. G. Hawes, H. M. Hunter, A. Wallace McCrea, H. E. Stump, H. W. Hall, V. E. Clark, H. E. Lobdell, William B. Claflin, Alexander Klemin, Roy Wansen, R. S. Allen, William H. Messenger, D. C. Tarplay, Schuyler Schieffelin, Hubert Mendleson, H. N. Calver, William M. Shakespeare, W. E. Barcus, R. C. Berger, A. S. Ackerman, E. W. Curtin, V. L. Hafner, John Sherman, E. S. Coldwell, T. S. Killion, Noel Chamberlin, Ross H. Dickson, J. H. Richardson, C. W. Williams, Charles L. Gabriel, W. L. Lange, A. E. Tuttle, S. I. Mann, R. O. Lowengard, J. H. House, Jr., R. B. Haynes, E. L. Kaula.

The following were elected officers in the Technology Post of the American Legion:

Commander, R. S. Allyn, '98; Vice-Commander, William M. Shakespeare; Adjutant, Noel Chamberlin; Historian, F. S. Killion; Finance Officer, William B. Claflin. Executive Committee Members at Large, L. D. Gardner, John DeBell, Schuyler Schieffelin.

RECENT VISITORS AT THE CLUB:

S. Barron, New York; Isidore Richmond, Boston; J. L. Karmire, Shelbyville, Ind.; S. M. Baxter, Braden, Chilli, South America; E. H. Finlay, New York; Albert L. Pashels, New Brunswick; Thomas D. Brapley, Butte, Montana; E. B. Strohmann, Bridgeport; James Barsur, Albany; Lieut. J. E. Killion, United States Army; K. B. Krudsen, New York; D. A. Tomilson, Chicago; E. C. Lowe, Chicago; F. Baderun, New York; Stephen Badlam, Beaver, Pa.; Fred E. Zurwelle, St. Louis, Mo.; W. H. Banks, Yonkers; H. A. Whiting, Portland, Ore.; Fred J. Rasmussen, Perth Amboy; Frank Dunn, Tacajo, Cuba; Robert Ellis, Boston, Mass.; C. C. Stewart, Boston, Mass.; E. A. Whiting, Keyport, N. J.; P. K. Wardsworth, New York City; C. Huntington Smith, Cleveland, Ohio; Paul Balcourt, Davenport, Ohio; Everett St. John, Philadelphia; Thomas K. Meloy, New York City; Paul Myler, Washington, D. C.—FREDERICK MATHESIUS, JR., Secretary, 320 Fifth Avenue, New York.

ALBANY—TECHNOLOGY CLUB OF EASTERN NEW YORK.—The Club held a clambake September 13 on the farm of F. W. Caldwell '99, about four miles outside of Schenectady. Thirty Tech men were present with their families, making a total of about seventy-five people. Autos decorated with Massachusetts Institute of Technology banners were used for transportation so quite a good showing was made. The eats consisted of clams, lobsters, chicken, bluefish, potatoes, corn, celery, rolls and watermelon and while this was in the bake, baseball, etc., was enjoyed. It proved to be a very successful affair and we intend to make it an annual affair.

The monthly luncheons will be started this month. We have just completed arrangements whereby each Tech man will be personally interviewed and told of the necessity of helping towards the $4,000,000 fund, and we hope to raise a good sized sum here.

The following is a list of the Tech men in this vicinity:

SCHENECTADY

(With the General Electric Company)

P. L. Alger, '15, Mrs. M. R. Andrews, '06, E. A. Baldwin, '96, E. H. Bancker, '18, S. H. Blake, '94, E. L. Blodgett, '05, A. A. Buck, '93, F. W. Caldwell, '99, E. S. Carter, '18, O. R. Clark, '86, E. L. Clarke, '17, E. J. Clouger, '18, Dr. W. D. Coolidge, '96, P. M. Currier, '14, A. G. Davis, '93, C. N. Draper, '07, G. A. Ely, '18, A. B. Fuller, '89, C. W. Gammons, '09, O. J. Gilchrist, '11, C. M. Gilt, '17, P. P. Greenwood, '07, L. A. Hawkins, '99, C. M. Herrick, '19, J. D. Hilliard, '92, H. M. Hobart, '89, A. G. Hoffman, '19, C. B. Hubbard, '94, A. W. Jones, '88, D. C. Jones, '14, E. E. Kimball, '02, N. J. Kingsbury, '02, Mrs. C. R. Kreuger, '02, F. A. Lane, '18, N. A. Lougee, '11, A. F. Macdonald, '88, G. M. J. Mackay, '08, H. M. MacMaster, '00. W. S. Mattocks, '96, F. Mackintosh, '86, B. H. Morash, '12, H. M. Mott-Smith, '93, W. P. Munroe, '19, C. W. Noyes, '15, R. Palmer, '04, K. A. Pauly, '96, A. B. Reynolds, '19, R. C. Robinson, '01, A. L. Romana, '11, H. R. Sargent, '93, A. C. Savage, '88, O. R. Schurig, '11, N. Sprague, Jr. '02, W. M. Stearns, '96, S. B. Stewart, Jr. '86, P. Swazey, '19, J. B. Taylor, '97, G. E. Tolman, '08, Miss A. Walker, '18, Dr. W. R. Whitney, '90, S. K. Wiley, '18, C. F. Woodruff, '18, A. Vogel, '13.

SCHENECTADY

(Outside General Electric Company)

W. C. Arsen, '01, J. P. Barnes, '05, S. C. Greene, '85, J. A. Haraden, '04.

ALBANY

W. J. Barcus, '08, E. C. Bowen, Jr. '97, W. A. Canady, '12, A. D. Dean, '95, H. W. Dun, '09, H. W. Dun, '74, J. Dyer, Jr. '95, W. S. Hale, '09, A. G. Hayden, '01, C. A. Holmquist, '06, T. Horton, '94, A. R. McKim, '85, C. V. Merrick, '00, E. S. Northrup, '96, W. Palmer, '99, W. P. R. Pember, '02, E. H. Sargent, '07, A. L. Simmons, '95, J. B. Stouder, '97, R. Suter, '00, A. O. True, '05, Dr. A. B. Wadsworth, '93, C. H. Wood, '91, B. R. Rickards, '99, Sen. M. Y. Ferris, '03, G. E. Willcomb, '04.—NORMAN A. LOUGEE, Secretary, General Electric Company Consulting, Engineers' Laboratory, Schenectady, N. Y.

AKRON—THE M. I. T. CLUB OF AKRON, OHIO—The Akron Technology Club started preparations for raising their quota of the Endowment Fund. The committee in charge consists of P. W. Litchfield, as chairman, G. W. Sherman, R. W. Ferris, L. G. O'Dell, and J. Dunlap. A meeting was held Tuesday evening, October 14, at which meeting the committee outlined what was to be done and how they were going to do it. At this meeting thirty members were present.

On Thursday noon, October 16, Dr. Maclaurin and General duPont attended the luncheon at the University Club in Akron. They outlined the plan and were given a very hearty welcome. At this meeting forty-six members were present.—W. H. FLEMING, Secretary, 350 Wildwood Avenue, Akron, Ohio.

BIRMINGHAM—SOUTHEASTERN TECHNOLOGY ASSOCIATION.—On the first of October the Southeastern Alumni Association had its first meeting. At this time in addition of some matters of local interest the attention of the members was brought to the campaign now being waged in interest of the endowment fund. There has been no change in the officers of the local Association, Mr. W. E. Mitchell being president.—J. C. WEIRS, Alabama Power Co., Birmingham, Ala.

CINCINNATI—THE CINCINNATI M. I. T. CLUB.—The Cincinnati M. I. T. Club has continued this summer its weekly lunches. A joint meeting is projected at Richmond, Ind., of the Dayton, Ohio, Indianapolis, Ind., and Cincinnati clubs. No definite date has yet been set. A dinner of the local club will be held October 24, at which we expect to have for guests President Maclaurin and General Coleman duPont, who expect to inform our community of the needs of Tech and the deeds of the mysterious " Mr. Smith."

It is with pleasure we announce the coming of Van R. Lansingh, '98, to Cincinnati, where he will be president of the Luken Window Company. Of the local men in the service Capt. Raynor H. Allen, '10, returned from France last month, and was married this month to Miss Emily Muth of Cincinnati. " Ray " lets no grass grow under his feet. Lieut. Charles F. Cellarius, '16, is now in an architect's office in New York for a few months' practice. Sergt. Charles R. Strong, '11, after doing construction work in England and France, is back once more with his partner, E. H. Kruckemeyer, '11, building houses here.—John M. Hargrave, Secretary, Cincinnati Toll Company, Cincinnati, Ohio.

CONNECTICUT VALLEY TECHNOLOGY ASSOCIATION.—The eleventh annual outing of the Technology Association of the Connecticut Valley was held at Fenwick Point on June 28, 1919.

The attendance, thirty-seven present, was larger than ever before. Much interest was shown in the discussion of plans for a winter meeting to take in Technology men from all over the State. It was voted that the officers plan for such a meeting to be held early in 1920, the meeting to be held probably in Hartford. Any Technology man interested in this meeting should be sure that his local Technology Association has his address, and he will be notified through his Association. The officers elected for the coming year were Mr. E. P. Marsh of New Britain, president, and Mr. E. W. Pelton, of New Britain, secretary and treasurer.

After the business meeting and banquet, we enjoyed a baseball game and a swim in the salt water. Some of the less agile even struggled with a game of golf. —E. W. Pelton, Secretary, 77 Forest Street, New Britain, Conn.

CHICAGO—TECHNOLOGY CLUB OF CHICAGO.—Technology alumni in Chicago are very much shocked and grieved by the sudden death of Mr. Charles E. Lord, '98, who was vice-president of the Technology Club of Chicago and very active in local alumni affairs. Mr. Lord died September 25, as a result of injuries received in an automobile accident at the Deering works of the International Harvester Company in Chicago on the evening of the 24th.

Mr. Lord was also connected at one time with the American Telephone & Telegraph Company, in addition to the companies mentioned in the obituary notice. I have known him since our student days at the Institute and he was a man of fine character and very popular with the alumni. He always gave freely of his time and energy in promoting the interests of Technology and the alumni body. He was also prominent in the affairs of the American Society of Mechanical Engineers.

Mr. Lord leaves a wife, Mary G. (nee Carroll) Lord and three children, Charles, Katherine and James Lord. High mass was held at Our Lady of Mount Carmel Church at 9 A.M. September 26, and the burial was at St. Paul's Cemetery, Hingham, Mass.

I am enclosing an obituary notice from the Chicago " Tribune ":

"Charles E. Lord, general patent attorney of the International Harvester

Company, died yesterday at the Alexian Brothers Hospital from injuries sustained at the company's Deering Harvester works on Wednesday, when the automobile in which he was going through the plant was struck by a switch engine.

"Mr. Lord had been the head of the Harvester patent department since 1912. He had previously been an examiner in the patent office at Washington and later was in the service of the General Electric Company at Schenectady, N. Y., the Bullock Electric Company at Norwood, Ohio, and the Allis-Chalmers Company at Milwaukee. He was a member of the American Society of Mechanical Engineers, Society of Automotive Engineers, Patent Lawyers' Association of Chicago, the American Bar Association and American Institute of Electrical Engineers."—HENRY A. PEMBERTON, Secretary, 732 Monadnock Building, Chicago, Ill.

CLEVELAND—TECHNOLOGY CLUB OF NORTHERN OHIO.—The Tech men of Cleveland got together at the Statler Hotel at seven o'clock, October 16, 1919, to hear President Maclaurin, General duPont and Mr. F. A. Smythe of Lorain, Ohio, speak on the Technology $4,000,000 Endowment Fund. A great deal of enthusiasm was aroused and a committee was appointed to organize teams to canvass Northern Ohio for funds to help Technology meet its part of the goal of $4,000,000.00.

The men on this committee are Franklin B. Richards, Max Hellman, F. A. Smythe, Frederick Metcalf, George E. Merryweather, C. E. Stamp, Harry E. Weeks, Robert B. Wallace, and Beiger V. Zamore.—B. V. ZAMORE, Secretary, 702 to 5-1900 Euclid Building, Cleveland, Ohio.

DULUTH—TECHNOLOGY CLUB OF LAKE SUPERIOR, DULUTH, MINN.—Nearly all members of this Association were employed in work essential to war industry and consequently did not serve in the ranks. They are all still busy at this work and grinding out all that they can. One member of the Association, Mr. Carroll Steele, was offered a position as inspector in the ordnance branch of the service but declined on the grounds that he thought this position could be better filled by an older and married man. He enlisted in the engineers' branch of the service and got across too late to see duty in the front line. He says that his principal occupation was cleaning up the small French towns and rest billets. Immediately after being discharged from the service he married and has settled down in Duluth.

Our secretary, Mr. Floyd M. Fuller, left us to take up work in the Ordnance Department and we understand that he is still busy with this work.

Mr. Samuel B. Sheldon, who is connected with the Minnesota Steel Co., was able to keep his plant in operation and is not having any trouble with labor strikes.

From now on I will keep my ears open and pick up points of interest pertaining to Tech men in this vicinity. Our Association has not met since this country entered the war but we are in hopes of having a meeting in the near future.—CHARLES D. BREWER, 1506 Alworth Bldg., Duluth, Minn.

DAYTON—THE TECHNOLOGY CLUB OF DAYTON.—We are continuing to hold our weekly luncheons on Tuesdays at the Engineers' Club of our city. During the summer months our attendance dropped off considerably but has been picking up so that we are having good attendance.

On Saturday, September 28, we held a special luncheon at the Engineers' Club and spent the afternoon in visiting the work of the Miami Conservancy District. Our president, Mr. Charles H. Paul, is quite prominent in this work, holding the position of assistant chief engineer. On our way back to the city we looked over the new city workhouse and farm under the guidance of Jim Barlow, our city manager. The affair was indeed a very enjoyable one.

The boys are all looking forward to a visit from Dr. Maclaurin. We hope to have a very good turnout for this affair.

We expect to combine with the Cincinnati organization and take a trip to Richmond, Ind., within the next few weeks. This trip is being looked forward to by most of the men, it being made by automobile from Dayton. We will be very glad to keep you posted on further activities.—W. H. Kiefaber, Secretary and Treasurer, 601 East Monument Avenue, Dayton, Ohio.

MINNEAPOLIS—TECHNOLOGY ASSOCIATION OF MINNESOTA.—The local section of the Alumni Association held a meeting of a social nature at the Lafayette Country Club on July 26.

Wives of members were invited and there was an attendance of about thirty.

No business was transacted but it was felt that the bond of friendship which associates of the Alumni in this section enjoy was extended to the Alumni's families, and the occasion was enjoyed by all present.

Among those who attended the function were: Gerald H. Beard and wife, T. A. Foque, wife and daughter, Harvey M. Hickok and wife, Mark G. Magnuson and wife, E. M. Newlin, Jesse W. Shuman, H. E. Young and wife, Clarence J. Brown and wife, Ralph Hamlin and wife, Harry W. Jones and wife, Arthur R. Nichols and wife, Willis R. Salisbury and wife, John A. Willard, Ralph Randall.

Mr. and Mrs. Waterfall of Bombay, India, were also present—Mr. Waterfall being an alumnus of "Tech" and on his way to Boston, returning from India.—H. E. Young, Secretary, 15 South 5th Street, Minneapolis, Minn.

NIAGARA FALLS TECHNOLOGY CLUB.—The second annual outing of the Technology Club of Niagara Falls was held Saturday, September 13. Buckhorn Island was again the chosen place and it met every need.

At promptly three o'clock, the peanut race was started and it furnished several "dark horses." P. E. Blood, '97, says it never pays to bet on the favorite.

In spite of the fact that O. Hutchins, '11, bet that the "kiddie kar" race would never finish, there were some thrilling heats. The track was set on the hotel veranda and J. H. Critchett, '09, nearly won.

H. V. Atwell, '18, and E. H. Mangan, '13, were captains in the ball game. The feature of the game was the fielding of R. E. Hyde, '12, who played right, center and left field simultaneously.

The score finally showed the most runs scored by Atwell's men with opponents a close second.

E. T. Pollard, '02, and J. H. Critchett were first and second chefs respectively. Let me tell you they can make some fish chowder. Next came beans, brown bread, dill pickles and coffee and — oh, yes—we almost forgot the pie a la mode.

Visitors furnished the after dinner amusement. The return trip in the launch was much enjoyed and we all voted thanks to the weather man who had furnished such a perfect day.

Among those present were J. M. Avery, '18, P. E. Blood, '97, J. H. Critchett, '09, N. Duffett, '11, W. M. Flanders, '13, R. E. Gegenheimer, '10, A. T. Hinckley, '08, Paul Hooker, '02, Otis Hutchins, '11, R. E. Hyde, '12, E. H. Mangan, '13, H. L. Noyes, '90, E. T. Pollard, '02, C. L. Smith, '15.

We are glad to have I. W. Wilson, '11, back with us. He is with the Aluminum Company.—N. Duffett, Secretary, care of Union Carbide Co.

NEW BEDFORD—TECHNOLOGY CLUB OF NEW BEDFORD.—The annual clambake of the New Bedford Technology Club was held at George Nye's bungalow at Allen's Pond on the afternoon of Wednesday, October 1. It was some bake, including the sweetest clams ever fished from the briny. Ike Litchfield was there and "a good time was had by all."

After the bake, the Drys and Wets indulged in a rifle target shoot, in which the Wets won, showing that a steady hand goes with an occasional bracer.

On Thursday, October 23, the club held a smoker at which George C. Gibbs told of his experiences in Paris with the Tech Bureau.—CHARLES F. WING, JR., Secretary, 36 Purchase Street, New Bedford, Mass.

NEW HAVEN TECHNOLOGY CLUB.—President Arthur T. Hopkins, of the New Haven County Technology Club, has appointed the following "Service Committee" to assist him and the other officers of the Governing Board during the ensuing year:

Edgar Taft, chairman, Edwin Pugsley, George Nichols, Forest Purington, Howard Morrison, E. A. Teeson, Steward Boyd.

This committee will help in carrying out the plans for the coming year and render counsel and advice to the president. It is hoped that through the personal touch of this committee more Technology men can be reached and more Technology spirit and enthusiasm stimulated.

An interesting program of meetings has been arranged for the year and among them some house meeetings. This latter idea is somewhat of a new one but promises to be a success. The first general meeting is scheduled for November 1 at the home of President Hopkins.

The club is glad to welcome the following new Technology men who have taken up their residence in New Haven or vicinity:

F. G. Babcock, Roy King, H. P. Shepard, Arthur B. Dewitt, Herbert F. Jermain, William H. Sage, Jr., and H. Gfroerer.—ROY L. PARSELL, Secretary, care of Winchester Repeating Arms Company, New Haven, Conn.

PITTSBURGH — PITTSBURGH ASSOCIATION MASSACHUSETTS INSTITUTE OF TECHNOLOGY.—Unfortunately, the local association in Pittsburgh has been practically "dead" since the beginning of the war, and is, at present, just in a process of revival. The first meeting in nearly two years will be a get-together smoker to be held Friday evening, October 24, at 8.00 o'clock, in the University Club.

The Endowment Fund Committee, however, has been active for nearly a month, and expects soon to report very favorable results of its efforts. Morris Knowles, '91, is chairman of the committee.—FRANCIS C. FOOTE, Secretary, Jones Building, Pittsburgh, Pa.

PARIS—TECHNOLOGY CLUB OF PARIS.—On Friday evening, September 19, the Technology men in Paris held their first dinner since the closing of the Technology Union in July. There are but few of us left—very different from the times, a few months ago, when a steady file of Tech men climbed the stairs of the University Union to drink George Gibbs' coffee every afternoon, and a year ago when officers were on their way between the Service of Supplies and the front, spending the evening sitting around exchanging hair-raising tales of recent midnight expeditions in No Man's Land and of mining under the enemies' trenches.

One sees few doughboys on the streets now, except where they are gathered around General Headquarters, the Knights of Columbus, the Young Men's Christian Association, and the eternal Peace Commission. Most of the officers are regulars, with campaign ribbons on their chests, and many looking very meek with their new pre-war insignia. Yesterday I met a captain who, the last time I saw him, was a full colonel in command of a regiment.

The men who gathered at Prokopes last night were all civilians. The list is as follows:

C. J. Berry, '13, late 1st Lieutenant A. S., electrical engineer for a French company of electrical manufacturers. Thomas J. Duffield, '14, late Major, Sanitary Corps, member Tuberculosis Commission of the Rockefeller Foundation. Walter T. Spaulding, '10, lately in the Naval Aviation, representing Dwight P. Robinson & Company, Contracting Engineers. Juan J. Urquidi, '06, Secretary of the Mexican Legation, Paris. C. H. Mower, '88, consulting engineer, Paris. P. Heroult, '14, recently in the French army, and for three years a prisoner of war in Germany, at present a director of the Franco-American Manufacturers' Association. Harold P. Gray, '16, representing the Goodyear Tire & Rubber Co., Paris. McC. Werlich, '15, representing the American Locomotive Sales Corporation. Edward Stuart, '10, late Major, Sanitary Corps, member Tuberculosis Commission of the Rockefeller Foundation.—EDWARD STUART, Secretary, 12 Rue Boissy d'Anglas, Paris.

ROCHESTER—THE TECHNOLOGY CLUB OF ROCHESTER.—On September 11 a special dinner meeting was held at the Newport House on Irondequoit Bay for the purpose of considering two questions, i. e., ways and means of assisting in the raising of the three million dollar fund for the Institute before January 1, 1920, and also, the question of the most fitting form which a memorial to Tech men who lost their lives in service should take. Mr. Lovejoy had been appointed chairman of special committees on both of these questions. Assistants were named at this meeting to help in bringing the merits of Technology to the attention of wealthy local men and endeavor to secure their aid in the raising of the fund.

With regard to the memorial, it was agreed that some suitable form of monument designed by a commission of architects so as to be in keeping with the Institute, would be most appropriate.

A famous "Newport" chicken and fish dinner was served to about twenty members, who attacked it with a great deal of spirit and "pep." Several of the younger men who have been recently graduated from the Institute were with us for the first time. Their enthusiasm and "Tech" spirit were most contagious and contributed largely to the pleasure of the meeting.

Mr. Mosscrop, one of the undergraduates, addressed the Club in the interest of the book which is printed and distributed to students and to outside preparatory schools, entitled, "Concerning the Massachusetts Institute of Technology." Mr. Mosscrop solicited advertising, as this is the means by which the expense of publishing the book is defrayed. The Club agreed to run a full page ad in this book calling attention to the Technology Club of Rochester and giving some data with regard to the Club.

On September 23 Dr. Maclaurin visited the Club in the interest of the fund which is being raised for the Institute. During the morning he was the guest of

Mr. Lovejoy. A luncheon was held at the University Club at which thirteen members were present, and at this time Dr. Maclaurin described the needs of the Institute very vividly and impressively and outlined the work which is to be done. After luncheon Dr. Maclaurin visited Kodak Park Works of Eastman Kodak Company.—Virgil M. Palmer, Secretary, Kodak Park Works, Eastman Kodak Company, Rochester, N. Y.

SYRACUSE—M. I. T. CLUB OF CENTRAL NEW YORK.—We haven't started our regular monthly meetings of the M. I. T. Club of Central New York, but we have a real live committee at work doing our share toward raising the four million dollar endowment. We will not be able to report final results for this issue, but hope to be right on deck next time.—J. S. Barnes, Secretary, 204 Harvard Place, Syracuse, N. Y.

URBANA—TECHNOLOGY CLUB OF THE UNIVERSITY OF ILLINOIS.—The Technology Club of the University of Illinois held its first meeting on October 3 in joint session with the local alumni from Worcester Tech. Among the new men who were present was H. W. Waterfall, '11, just returned from Calcutta, India, where he has been located for the past eighteen months as designing engineer for the Angus Jute Company. On his return to this country he accepted a position as Assistant Professor of Mechanical Engineering here at the University, and he will be connected with the Mechanical Engineering Laboratory for the coming year. Dr. F. H. Newell,'84, the new president of the American Association of Engineers, has been very active in visiting many of the local engineering associations during the summer. He reports that engineers in general have finally begun to realize the vital importance of a national organization which will be able to establish in the public mind a proper regard for the value of engineering services.

Tech men in this locality are cordially invited to meet at the University Club, Urbana, the first Friday of each month, at noon.—A. C. Willard, Secretary, University of Illinois, Urbana, Ill.

WASHINGTON—WASHINGTON SOCIETY OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.—The Washington Society of the Massachusetts Institute of Technology was dormant during the summer, due to absence of three of the officers from the city and the sickness on the part of another. For this reason there are no special notes for the November number.

It is planned to get the Society moving this fall and to have several lively meetings.—E. J. Casselman, Secretary, 3519 Lowell Street, N. W., Washington, D. C.

BOOK REVIEWS

METALLURGY OF LEAD. By H. O. Hofman, E. M., Met. E., Ph. D., Professor of Metallurgy, Massachusetts Institute of Technology; New York: McGraw-Hill Company; London: Hill Publishing Company.

With rapid progress in the industrial arts due to improved technology, textbooks describing processes and methods grow obsolete and need constant revision. Then a time comes when excision and repairing no longer suffice and entire remodeling must be undertaken. Such an epoch has arrived in the history of Professor Hofman's work on the "Metallurgy of Lead and the Desilverization of Base Bullion," and this treatise replaces the wellknown manual. Only the chapters describing the methods of the reverberatory smelting of lead ores and the German cupellation process retain something of their original dress; the former because it presents the chemistry of the process in a simple manner, and the latter, as it enables cupellation to be studied more satisfactorily than in later forms. Excessive detail can easily obscure general principles, and the object of the author is not only to describe what has been effected, but to show the reason for the successive steps.

Only a comparatively small part of the book is devoted to the properties of lead, its alloys and compounds. Much chemical work has been effected of late on industrial lead alloys, and this section might have been enlarged with advantage. The subject of eutectic mixtures scarcely receives the attention it deserves, the author having apparently decided that it was undesirable that such topics should compete in interest with the main subject of lead smelting. The copious references and bibliography attached to each page and every chapter make amends, however, for any deficiency.

Professor Hofman devotes one-half of his book to descriptions of the process and the improvements that have been effected in the blast furnace as applied to lead smelting. If it is remembered that an ore containing more than four per cent of SiO_2 must be treated by blast furnace smelting, and that all lead ores can be conveniently treated in the same way, the space devoted to this section will be understood. Moreover, as the argentiferous ores of the Rocky Mountains and the Pacific Coast contain much more than this amount of SiO_2, this method of smelting possesses more than usual attractions for the American reader. As a rule in the United States, all the ores received pass to the blast furnace charge, being variously apportioned to form suitable mixtures as regards lead content, to the collection of other metals in a matte, and to ensure that the final waste product carries no metal of value. The general process is not difficult to grasp, but the many modern modifications introduce an almost bewildering amount of details, into which the author enters with conscientious determination to exhaust the literature of the subject. Fortunately, the numerous and excellent illustrations are a great assistance in following the text.

The construction of blast furnaces, the method of operating, the treatment of the resulting products, are all comprehensively described. It is impossible to do justice in a notice to the industry that has summarized and digested a large literature, or to the skill with which the main features are presented.

A final chapter is added on the dangers and risks of lead poisoning, pointing out the remedies and precautions that should be adopted.—CONDENSED FROM "ENGINEERING," ENGLAND.

THE COST OF FOOD: A STUDY IN DIETARIES. by Mrs. Ellen H. Richards, late Instructor in Sanitary Chemistry at the Massachusetts Institute of Technology. (London: Chapman & Hall).

A third and revised edition of this book is offered in order to continue the usefulness of the author's original work, now revised to harmonize, as far as possible, with present-day ideas and costs by John F. Norton, Ph.D., Assistant Professor of Chemistry of Sanitation at the above named Institute. The book, therefore, remains as practical as when it first appeared, and though written for an American public, holds good equally for English housewives who are interested in obtaining for themselves and their families the best that they can afford, and for nurses and cooks in English hospitals who are concerned with the scientific and economical side of the food question. Each chapter has its value, whether the subject be food for the sick person, for infants and young children, for middle life or old age. The object of the book is not so much to give information as to stimulate research. Nevertheless, it contains some valuable and scientific little tables on the nutritive and economic values of foods (p. 99), the dietary views of men, women and children, and a choice of recommended menus.

ELECTROMAGNETIC THEORY OF THE TELEPHONE RECEIVER.

A comprehensive paper, by Dr. A. E. Kennelly and Mr. H. Nukiyama on the above subject has been read before the American Institute of Electrical Engineers during March last, and is now issued as a booklet by the Research Division of the Electrical Engineering Department of the Massachusetts Institute of Technology. The paper is mainly mathematical, and does not lend itself to abstraction, but it introduces some interesting modifications in the theory developed by the authors and others during recent years, taking into account the magnetomotive force produced by the vibration of the diaphragm in the permanent magnetic field. The motional power is derived partly from the testing alternating current and partly from changes in power expended in the magnetic circuit. The motional impedance circle, derived by the authors to explain the phenomena in the telephone receiver, may therefore also be regarded as a power circle, with components along three different axes of reference.

ERRATUM

On page 474 mention is made of an appropriation of $1,000,000 which Technology is to receive from the Commonwealth of Massachusetts for two years more. These figures should read $100,000. This erratum should inspire the endowment fund workers to greater efforts.

NEWS FROM THE CLASSES

1866

Robert Hallowell Richards, 32 Eliot Street, Jamaica Plain, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Eben S. Stevens, in the early spring, fell and fractured his hip. From this, he has now recovered sufficiently to be able to attend meetings and to travel by railroad, in fact, he must be well over the effects of the accident.

Whitney Conant has had a shock, which has necessitated his withdrawal for the time, from business. He is slowly, but we believe steadily, recovering at a resort in New Jersey.

The secretary has been on several professional trips to neighboring states, on one of these he had the pleasure of saving what appeared to be, by a brief test, values to the extent of $450,000 per year.

The secretary and his wife have been gardening and have grown potatoes enough to supply the family for the year, besides other summer vegetables. The immediate cause for these seems to have passed with the signing of the armistice, but the momentum acquired during the war has not yet spent itself, and the summer vegetables grown in one's own garden are just as sweet as ever.

Fill out and send in YOUR blank for the Technology War Record Book.

1869

Every Man's Job — Work for the Technology Educational Fund.

George T. Tilden, long a prominent architect in Boston, died on Thursday in Milton, where he had lived for the past forty-three years. He had been ill for about two months. He was born in Concord, N. H., on March 19, 1845, the son of Rev. William Philips Tilden, a Unitarian clergyman, and Mary Jacobs (Foster) Tilden, of Boston, both of whom were natives of Scituate.

As a boy, George Tilden lived in Walpole and in Fitchburg, where his father held pastorates, and he later attended Phillips Exeter Academy in New Hampshire, and attended some of the earliest lectures given at the Massachusetts Institute of Technology. He then studied architecture in Boston offices, continuing these studies during about two years' residence in Paris, 1869 and 1870. There he studied under Emile Vaudremer.

On returning to this country Mr. Tilden began practice in Boston in 1872, and from 1880 until the death of Arthur Rotch, he was associated with him under the firm name of Rotch & Tilden. After Mr. Rotch's death, in 1895, Mr. Tilden continued in his profession alone, up to his retirement about three years ago. He designed and erected many churches, libraries and school buildings, as well as private residences in various places in New England and in Washington, D. C., Charleston, S. C., and elsewhere.

He was a Fellow of the American Institute of Architects, of the Boston Society of Architects, and a life member of the Boston Young Men's Christian Union, as he was of the American Unitarian Association. He was interested in the work of the First Parish in Milton and active in the town affairs there. He long was a member of the Royal Arcanum, from which he had retired. He served for a long time as a trustee of the Rotch Traveling Scholarship.

On October 5, 1871, Mr. Tilden was married to Miss Alice Olmstead Butler of Pittsburgh, Pa., daughter of Major John D. Butler, United States army. Mrs. Tilden survives her husband, who leaves also a son, Charles Joseph Tilden of Baltimore, prominent there in the civil engineering interests, as well as two daughters, Miss Alice Foster Tilden and Miss Edith Selina Tilden, both of whom live at the family home in Milton.

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1870

CHARLES R. CROSS, Secretary, 100 Upland Road, Brookline, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Theodore Francis Tillinghast whose death on January 5 last was briefly referred to in the REVIEW for April was born at Taunton, Mass., February 15, 1848, the son of Pardon and Mary Jane (Burbank) Tillinghast. He entered the Institute in 1866, and pursued the course in Civil Engineering, holding a high rank in all the studies throughout.

Upon his graduation he accepted a position as adjunct professor of Civil Engineering at Lafayette College, Easton, Pa. He remained there only until the close of the college year 1871-72, when he resigned his position, not being satisfied with the outlook, and returned to his earlier home, New Bedford. Here he spent the remainder of his life with the exception of a residence in Roxbury for a very few years, engaged in private business.

He married Miss Ada Hamilton Whitton October 12, 1882. No children were born to them. With his wife he made several journeys to Europe. During the last years of his life his health was seriously impaired.

As a student Tillinghast was one of the leading spirits of his class, and took a lively interest in all that concerned it. He was an officer of the original Class Association of 1870, and in the proceedings somewhat later, which led to the formation of the Alumni Association, he played an important part. He continued his interest in these through subsequent years, and was a life member of the Association. He lent his best efforts to the institution of the Technology Club of New Bedford; and was a powerful factor in its success.

His life was that of a good citizen, quiet and unostentatious, never seeking popular applause, but fulfilling faithfully all the duties that arose. He was an extensive reader of solid books, and a remarkably well informed man.

Though quiet and undemonstrative, he was yet very firm in his views, and capable of determined action when this was called for. A striking instance of this is related to me by his wife. He was an ardent patriot, a life-long Democrat, and unfailingly true to his convictions. But when the difficulties incident to the entry of this country into the Great War came to pass, he was no longer able to support the administration in its utterances. The autumn of 1918 found him seriously ill, and unable to leave his bed for more than a very short time. But when election day came, November 5, he rose by great exertion, was dressed, though with difficulty, and by a supreme physical effort went to the polls, where he voted the straight

ARTHUR C. FARLEY

Class of 1872

Republican ticket as his protest aginst the appeal of President Wilson for the election of a Democratic Congress. The labor exhausted him completely. "He came home," his wife writes, "looking like death, but with a light of satisfaction in his eyes, and went to his bed never to dress or come downstairs again." He died just two months later to a day.

All the classmates and other companions of Theodore Tillinghast have the pleasantest and most cheerful recollections of him. He was very able, earnest, energetic, diligent, and moreover had a quiet, gentle humor which made association with him extremely agreeable, and which continued through his life. Those of us who remain will not forget the friendship of early days.

Fill out and send in YOUR blank for the Technology War Record Book.

1872

C. Frank Allen, Secretary, 88 Montview Street, West Roxbury, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Too much of the secretary's time has been spent in the last few years in recording the deaths of classmates. Now he is especially sad at the loss of Arthur Farley, who died suddenly at his home in Auburndale, early on Friday morning, June 27.

Arthur Christopher Farley was born March 13, 1851, the eldest son of Noah Webster Farley and Permelia Hammond Thayer. He entered the Institute in 1868, with the Class of '72, having prepared at Chauncy Hall School. He was a fine scholar, earnest and thorough in his work. The secretary has a vivid remembrance of his good work in military drill, also, where he was among the half dozen reserved for final judgment in the individual prize drill.

Trouble with his eyes led to his withdrawing from Technology after a year and a half of work. He must have entered, at once, the employ of the wholesale dry goods firm of Farley, Amsden and Company, of which his father was senior partner. The firm's name was changed in 1872 to Farley, Harvey and Company, as at present. Arthur Farley became a member of the firm in 1880, and was its senior member at the time of his death. He has always been a student, thorough in his ways, going to the root of things. Quite recently he stated to the secretary, that even his short stay at Technology had been a valuable training for him.

Farley, in temperament, was a positive, not a passive, force. He had his part in the business life of Boston. He was a member of the Boston Merchants' Association, of which he had been a director, and was for a long time its treasurer, succeeding his father in that office. He took an active part in the formation of the Boston Chamber of Commerce, and served upon important committees of that body. He was a director of the National Wholesale Dry Goods Association.

As one of two delegates of the Merchants' Association he attended for several years, the Peace Conferences at Lake Mohonk. Like most good citizens he loved peace; in the outcome, he was not, however, a pacifist; his two sons were lieutenants in the United States army, and both overseas, and his wife and daughters did their share in women's activities during the war.

In politics he was not a strict party man; he was normally a Republican, but discriminating and occasionally an independent.

He was a deacon of the Congregational Church at Auburndale, and a member of the Congregational Club. He was interested in good works; he was easily persuaded to do committee work in raising the building fund for the Bunker Hill Boys'

Club; he was also interested in the Union Rescue Mission on Dover Street, and was one of the trustees of the Walker Missionary Home in Auburndale. He was also a Freemason.

Farley was a man well informed upon many subjects; he had traveled much, to Panama and South America, to Hawaii, and many times to Europe. He was a member of a number of clubs: the Boston City, Puddingstone, Twentieth Century, Economic, and Appalachian Clubs; he was also a member of the Bostonian Society. Golf was his favorite recreation, and he was a member of both the Brae-Burn Country Club and the Weston Golf Club.

Arthur Farley married in Boston, in 1882, Miss Helen Judd, daughter of Col. Charles Hastings Judd of Honolulu, Hawaii. He is survived by Mrs. Farley and four children; Mrs. William T. Massey of Winchester, Va., Mrs. Stephen E. Wright of Auburndale, Charles Judd Farley, who has just returned from service on the other side, and has entered the employ of Farley, Harvey and Company; and Arthur Francis Farley, now a student at Yale, after service in the army. A brother, William T. Farley, is still a member of the firm of Farley, Harvey and Company, and another brother and a married sister are still living.

It has been the secretary's good fortune to frequently meet Farley at lunch at the round table at the Boston City Club, and to grow fond of him. Up to the time of his death he seemed unusually well preserved, active and alert. He would more readily have been taken for a man of fifty than of nearly seventy. To the secretary he has seemed one of the most obviously straightforward men he has ever known and lovable withal.

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1873

SAMUEL EVERETT TINKHAM, Secretary, The Warren, Roxbury, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Several members of the class met on the steps of "Old Rogers" on Saturday morning, October 4, 1919, at 9 o'clock, it being the 50th Anniversary of their first day's attendance at the Institute.

William Dale Harris died at Ottawa, September 28, 1919. A local paper states that he was born in England, and was a former president of the Montreal Terminal Railway. His construction works included parts of the International Railway, the Nova Scotia Railways, the Canadian Pacific Railways and branches.

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1875

EDWARD A. W. HAMMATT, Secretary, South Orleans, Mass.

Every Man's Job — Work for the Technology Educational Fund.

H. E. STOWE

Word was received in Hudson, Tuesday morning, July 22, 1919, of the death in Nova Scotia of Horace E. Stowe, son of the late E. M. Stowe, and for many years a prominent citizen of Hudson. Mr. Stowe left Hudson some eighteen years ago. For a number of years he had lived in Washington during the winter and maintained a summer home at Sandwich. The body was brought to Hudson for burial.

Horace E. Stowe was born in a house at the corner of Grove and Cherry Streets, August 29, 1854, being the second of six children, only two of whom lived through infancy. He was son of Edmund M. and Henrietta G. (Whitcomb) Stowe.

He attended the Hudson public schools until about 1870. That year he attended Allen School at Newton. The following year he entered the Massachusetts Institute of Technology for a special course, being with the class during '71-'72, leaving in 1873. After completing it he entered the shoe business, and from 1875 to 1880 was superintendent of the factory of Stowe, Bills & Whitney. In the latter year he was admitted to the firm, in which he became a director and treasurer.

May 3, 1876, he was married to Miss Jessie B. Bryant of Hudson. The union resulted in two children, Barbara and Vira, both now married.

Mr. Stowe was clerk of the Hudson Unitarian Society twenty-two years, clerk of the Hudson Savings Bank several years, member of board of trustees twenty years, and member of the board of investment ten years. He was trustee of the public library and served on various town committees, and had acted as town moderator.

He was instrumental in the organization of the famous Houghton Engine Company No. 2, and was assistant foreman under Henry F. Hurlburt. Later he had a hand in organizing Relief Hook and Ladder Company, and which he served as clerk. He was a member of the board of fire engineers in the 70's, and H. E. Stowe Hose Company was named after him.

He was an advanced Mason. He is survived by his wife, two daughters, both married; and a brother, Arthur N. Stowe, Hudson.

The funeral was from the home of his brother, Arthur N. Stowe, Forest Avenue, with service in the Unitarian Church, at 2.30, conducted by Rev. John Baltzly of Hudson, Rev. John Mills Wilson of Lexington, and Rev. Mr. Stocking of Washington, all former pastors of the deceased. The Lotus Male Quartet sang.

The interment was in Forestvale Cemetery. The bearers were Frank Taylor, George P. Keith, Caleb L. Brigham, Fred S. Rowell, Capt. Fred B. Dawes and Ralph E. Joslin.

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1876

JOHN R. FREEMAN, Secretary, 815 Grosvenor Building, Providence, R. I.

Every Man's Job — Work for the Technology Educational Fund.

Mr. John R. Freeman, secretary of the class of '76, is now in China as consulting engineer for the Chinese government in regard to the rebuilding of the Grand Canal, therefore was unable to send any information relative to his class for publication in the November REVIEW.

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1877

R. A. HALE, Secretary, Essex Company, Lawrence, Mass.

Every Man's Job — Work for the Technology Educational Fund.

ARCHITECT BEAL DIES IN HANOVER

KNOWN ALL OVER STATE AS DESIGNER OF COUNTY BUILDINGS

Died July 7, 1919

J. William Beal, a prominent architect with an office on Summer Street, Boston, dropped dead at his home here shortly after four o'clock this afternoon. Heart disease, from which he had been ailing for a considerable period, was the cause of his death. He had been in his usual health up to within a few minutes of the time he was stricken and was in conversation over the telephone.

He was born on May 19, 1855, in South Scituate, now Norwell, son of John and Lucy A. (Barker) Beal. He was educated in the schools of the village and later at Hanover Academy, later studying at various technical schools at Boston and other places.

He was perhaps best known as the architect of county buildings throughout the state, those at Brockton, at the Plymouth county seat, and other places, as well as many large business blocks in various cities of the state, bearing testimony to his ability. His last great work was the designing of the new tuberculosis hospital for Plymouth county, situated at South Hanson, just completed and dedicated, and he made his last public appearance at this dedication, when he turned over the keys of the new institution to the county commissioners.

He was married on June 2, 1884, to Mary W. Howes, daughter of the late Dr. Woodridge Howes of Hanover, and she, with five children, survives. The children are Olive M., John W., Horatio W., Robert W., and Gerald F. Beal. He was a member of St. Andrew's Episcopal Church at Hanover, and was prominent in town affairs, having been a member of many important town committees and at one time a candidate for representative from the district.

The funeral is to be held on Thursday afternoon at St. Andrew's Church, and burial will follow at Church Hill Cemetery, Norwell.

Mr. Beal entered the Massachusetts Institute of Technology in 1873, and graduated with the class of 1877. While at the Institute he impressed the professors and his fellow classmates with his ability of his work in the various problems that were presented, and his genial personality and good nature always made the tasks seem much easier. His practical experience as a builder before going to the Institute was of great value in the practical designs in his architectural work.

After graduation he worked with R. M. Hunt, architect in New York, and later went into the office of McKim, Mead & White, architects in the same city. In 1882 he took an extended European tour for the purpose of studying architecture on the continent. On his return he opened an office on Summer Street, Boston, where he was still practising his profession at the time of his death. Three of the sons were associated with him in business and relieved him of many of the details.

He had been in poor health for several years past and had not attended the class meetings with regularity. All of the admirable work that he has completed in the past will remain as a lasting monument and his influence in the high ideals which he set will long be felt in the community in which he lived.—BOSTON HERALD.

The secretary made a friendly call on George W. Kittredge, '77, chief engineer New York Central, a month ago and was much interested in his collection of carrier

J. WILLIAMS BEAL, '77

pigeons in which he is interested as a pastime. He has developed some fine flyers and during the war furnished the United States government with sixty flyers for use in France. The first message at the beginning of the war brought from the front line trenches to General Pershing was conveyed by one of Kittredge's pigeons. He holds the record in the United States of the best flight for a distance of five hundred miles. The speed is from sixty to seventy miles per hour.

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1880

GEORGE HUNT BARTON, Secretary, 89 Trowbridge Street, Cambridge, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Nothing has been heard from any member of the class during the summer, except that occasionally a wave of the hand in greeting is received as Miller is passed on the street.

The secretary spent most of the summer in a trip to Alaska and the Lake Atlin region in northwest British Columbia, having a party of thirteen in his charge. Very comprehensive drives were taken in the park system of Chicago and around St. Paul and Minneapolis. Warren Upham, formerly of the New Hampshire State Geological Survey, later of the United States Geological Survey, and at present archeologist, State Museum of Minnesota, joined the party for the latter drive and gave us the benefit of his knowledge of the geology and archeology of that region. A stay of one day at Banff and two days each at Lake Louise and Glacier gave the party a chance to see and examine much of the geology of those regions and to enjoy the magnificent scenery for which the Canadian Rockies are famous. Hasty trips were made on shore at Alert Bay, Prince Rupert, Ketchican, and Juneau. The steamer backed up to within a few hundred feet of the front of the Taku Glacier, where for about an hour we were able to watch the downfall of great masses of the ice-front and the formation of icebergs. One day was spent at Skagway and in an inspection of the region. The White Pass, once very famous for the difficulties encountered in crossing it, was passed with ease in a parlor observation car. Five days were spent at Atlin where a fine hotel stands on the shore of Lake Atlin. Here the party visited the hot springs, the soda spring, and inspected the placer mining at Discovery and the quartz mining at Pine Creek. The immense size and the great number of lakes in this part of British Columbia and the adjoining part of Yukon Territory in which the party spent one day was a great surprise to us. One afternoon was spent in a steamer ride around a small portion of Lake Atlin in which we not only had a fine view of the rugged mountains of the region but we also had a very extended view of the great Llewellyn Glacier which rises from the same snow-field as does the Taku Glacier which we had seen from the other side of the mountains. While at Atlin we had the benefit of the knowledge of the geology of the region acquired by the local photographer who had made special studies of both geological structure and of the glaciers. He accompanied us on some of our trips and furnished the party with large numbers of excellent views of both geological and glacial features. We also obtained much information from the mining recorder of the province who furnished us with several reports upon the vicinity.

On the return trip we took hasty trips around Victoria, Seattle, and Tacoma and from the latter place visited Mount Rainier, where we spent three nights, having an opportunity to inspect two of the glaciers and to see much of the geology. At Portland we took a ride over the famous Columbia River highway which gave us an exceptional opportunity to inspect the great lava flows through which the Columbia River cuts its way, and later on the way to Pocatello we saw something of the immense lava plains of the Snake River valley.

Five days were spent in the Yellowstone Park among the hot springs and geysers and in a visit to the canyon of the Yellowstone River. One day was spent at Salt Lake City in a ride around that region. Then we passed through the Grand Canyon of the Gunnison and the Royal Gorge of the Arkansas and from Colorado Springs, where we spent two days, in two rides we visited the Garden of the Gods, the Cave of the Winds, South Cheyenne Canyon, and ascended to the top of Pike's Peak. These two rides gave a good opportunity to see very much of the geology of the region. At Denver we rode over the Lookout Mountain Drive which gave an extended view of the mountains.

Finally, we spent one day at Niagara Falls, where we were joined by Father M. J. Ahern, a former Institute student, now President of Canisius College at Buffalo, N. Y. He, with a friend, accompanied us on the Grand Gorge ride in which he pointed out the principal geological features. Then he furnished automobiles for the party and took us to and through the great power plant and the large shredded wheat manufactory, then to Goat Island and the Three Sisters, giving a general account of the geology all the way. Then he took us over a twenty-six mile drive to Buffalo where he entertained the party at a very fine dinner, after which he showed us over his various laboratories and lecture rooms in the college and lastly took us to the railway station and saw us on our way to Boston.

This trip of a little over seven weeks in length, though a hasty one for the amount of country covered, was on the whole a very successful one and the members of the party came back with a much greater appreciation of the beauty and grandeur, as well as the vast extent, of our country, while they had grasped the fundamental geological structure of the regions visited.

N. B.—The secretary would here make a special request of any former member of the class of '80 who reads the REVIEW to send him some data concerning his present life and activities.

Fill out and send in YOUR blank for the Technology War Record Book.

1882

WALTER B. SNOW, Secretary, 136 Federal Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

The war record of John P. Wood covers several months in command of a Cavalry Regiment; a brief period in command of a regiment of Engineers; and finally as Colonel (Cavalry, Engineers, Quartermasters' Corps). Wood's home address is still Wayne, Pa., 234 Walnut Avenue.

The war records of other members of the class do not appear to be numerous. Recent letters on the subject have been received from Ely, Hall, John H. Ross, Strickland, A. W. Walker and Miss Ames.

Munroe is just now looking forward with hope to a Congressional appropriation of $20,000,000 for carrying on the work of the Federal Board for Vocational Education, of which he is vice-chairman.

Fill out and send in YOUR blank for the Technology War Record Book.

1883

HARVEY STUART CHASE, Secretary, 84 State Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

No notes have been received from the secretary.

Fill out and send in YOUR blank for the Technology War Record Book.

1885

I. W. LITCHFIELD, Secretary, Newtonville, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Sayin' we forget it! Sayin' we make believe nothing has happened and that there really is a Santa Claus!

Here comes Charley Allen. "Ahoy!" says he. "Ahoy!" says I, and he handed me this:

> I was glad to get your note, and here is my little story.
>
> As you know I was on the staff of the Massachusetts Board of Education when we went into the war. On the following October I was asked by the Emergency Fleet Corporation to help in organizing and operating a plan for training men for shipyard trades to meet the great shortage of skilled men. Being an old guy who could do nothing else, this seemed to me to be my "bit," and so I went into it and staid on the job until the armistice was signed. I served as Assistant Superintendent of Training and as Superintendent of Instructor Training.
>
> In the first capacity I looked out for the efficiency of the training in the yards. In the second capacity I developed and carried out the training of shipyard mechanics to act as instructors of their different trades. When the armistice was signed we had trained about fourteen hundred instructors and they had trained about thirty-five thousand men, which helped some.
>
> This was my war job and I am mighty glad that I had a chance to help out.
>
> After the armistice was signed my job was done so I resigned from the Emergency Fleet Corporation and from the Massachusetts work (I had been on leave from the Board), and am now on the staff of the Federal Board for Vocational Education. For at least the immediate future my headquarters will be in Washington.
>
> I am sorry in many ways to leave Boston but that is the way things go in this life. I am doing a lot of interesting work partly in connection with the re-education of wounded men and partly in trade training.
>
> I was in Wilmington last fall and had a fine talk with McRae. He is the only '85 man that I hit in my travels.
>
> I shall hope some time to get up to a class dinner again. Remember me to any of the boys that you see. I have heard that nearly all of them got a chance to get into some form of war work and went in — Good for '85.

Charles was particularly qualified for the important work that he took up, and it is a peculiar coincidence that later on when some reorganizations were made in the Emergency Fleet Corporation, he found himself working in co-operation with Dean Louis E. Reber, '85, of the University of Wisconsin, who had general charge of the educational work. Reber came to Washington to become connected with the United States Public Reserve, Department of Labor, afterwards taking up the educational and training work of the Emergency Fleet Corporation.

Tom Fry was also good enough to send in a note which gives but a little idea of his public activities:

> As to news — my two sons were in the army. The oldest has just returned from France with two service stripes and two wound stripes — wounds, fortunately, not

serious. The youngest was in the Reserve Officers Training Corps and the Student Army Training Corps, and obtained a commission at Camp Lee too late to go over.

Through no fault of mine I was sent to the Legislature again this year and was so fortunate as to be appointed chairman of the Committee on Education, and therefore helped to pass the new Educational Bill — best thing of its kind. Then the Governor appointed me a member of the State Board of Education under the new law; you may call it reward or punishment, but I'm in for four years.

I was local fuel administrator 1917–18 and 1918-19 and of course did more or less in other war work — draft board advisory member — Liberty Loans, etc. — like everybody else who had patriotism and sense of duty.

P.S. I am a grandfather.

Listen to that exultant burst just as he closed the door! A grandfather forsooth — who isn't? It is a class of grandfathers! True there are a few who stand afar off, like the Pharisee, and thank God they are not as other men are — in the grandfather class — but it's just a bluff. "How about it, Arty?" and I quickly hung up the telephone.

Homer had a mighty interesting experience, and was one of the very few members of the class who went across:

Your letter of inquiry came to Providence while I was on the way back from the other side, so I have not had opportunity for an earlier reply. Yes, I have had interesting experiences during the past year and am glad that I was able to help a bit even though not assigned to front line work.

Leaving home the latter part of June, the delays of six weeks in New York, ten days in London and eighteen days in Paris prevented arrival in the field until the eighteenth of September.

To an architect this period of waiting was not lost time, as it gave opportunity for renewing acquaintance with buildings that were old friends and also for finding many new friends among both men and buildings. In Paris I had also the experience of going through the last air attack, which, while it lasted, was quite exciting.

Though I had expected to do work in the Young Men's Christian Association with the American troops, I was assigned to the Foyer du Soldat in the French army and became the American director of the foyer at Le Mesnil sur Oger, a little town of eight hundred inhabitants, some sixteen kilometers south of Epernay and directly south of Reims. At Le Mesnil we had a good foyer of two barracks and were able to help comfort and entertain large numbers of poilus and officers, who were either en repos or were moving along just back of the front line forces. Infantry, artillery, cavalry, the fine chasseurs d'Alpine, the picturesque Marrocains, in fact, all sections of the French army were represented in this procession.

Foyer headquarters at that time were at Epernay, to which partially destroyed town I journeyed many times by cart, train or bicycle, to hunt for supplies for our canteen.

We ran quite a store at Le Mesnil and tried to keep on hand the little things that the soldiers liked to purchase.

We had a good library, piano, violin, phonograph and some card games, so, with the large amount of letter paper handed out each day, we were able to provide quite a variety of entertainment of the quiet sort. A fine old poilu, Fournier, one of the territorials, was permanently attached to the foyer and was responsible for the hot coffee and chocolate that were consumed in great quantities.

The arrival of a regiment was always a stirring and picturesque occasion, colors flying, band playing and armed men filling the narrow streets until quarters were found. Our French director would at once request a detail of four men to assist at the foyer. Without exception these men helped us in faithful fashion. I made many friends among them.

After the armistice was signed our supplies were obtained with constantly increasing difficulty. In fact many times the poilus had to go without tobacco and cigarettes.

The civiles of the town were always short of food and ordinary supplies. So, as I had to live as they lived, I passed through a long period of slow starvation that made me a fit subject for the attack of influenza that struck me in December.

Until the Huns were driven away from Reims, about October 5, we could hear the constant noise of the guns and at night could see the flashes. Fortunately the enemy avions that flew overhead did not drop bombs on us as they did on Chalons and Avise not far away.

One of the best experiences I had was a flight in a French bombing plane, a big Farman 8, from the hangars at Villeneuve over the old Hindenberg lines to Reims. We saw miles of trenches and circled down to about four hundred metres over Reims cathedral, which gave a fine view of the ruins. Flying is certainly a royal sport. I surely enjoyed every minute of the trip.

Late in December our foyer was closed, as all the French troops had moved on with the general advance, and our outfit was no longer needed. I therefore crawled back to Paris to seek medical advice and to recuperate. In January I transferred to the Educational Commission of the American Expeditionary Forces, and spent a month and a half at Paris, in charge of the personnel of the Fine Arts section.

Can tell you it seemed mighty good to be with the Americans again, for being the only American is a bit lonesome at times.

Saw Gibbs and other Tech men many times at the University Union, and had two good visits with Charlie Eaton just before he left for the States.

February 18 a party of us traveled to Beaune, where the new big university for the American Expeditionary Forces was to be organized. This trip might establish my claim for a wound chevron, for when something side-swiped the car the broken window glass cut a small piece off the top of one ear, with rather gory results.

At Beaune we were more than occupied day and night in the hustle to change over the large group of hospital buildings to the needs of the university. Problems had to be solved in a hurry before the men arrived, and all sorts of difficulties had to be overcome. It was a strenuous time. Gradually the buildings, the courses and the instructors got into working order and we settled down to do all we could for the men in the three months' period

Our college of Fine Arts had a fine lot of officers and men who were more than ordinarily interested in picking up all they could in our departments of Architecture, Painting, Sculpture and Commercial Design. We had a constantly changing group of about three hundred, while the whole university varied from eight to twelve thousand students. Though we were not large in numbers the character of our work made us quite conspicuous, so that our exhibitions were visited by many army men and civilians. Had several chats with General Pershing during his two inspection trips.

In addition to the regular work at Beaune our excursions for Field Work gave us opportunity to see a portion of the good architecture of France. By truck or train we visited Dijon, Vezelay, the Loire Valley, Arles, Nimes, Autun, Bourges and Paris and made many valuable measured drawings and sketches. I understand that it is planned to exhibit these drawings in Washington at an early date.

As to my own particular work at Beaune University, my jobs as Associate Director, Head of the Department of Architecture, and Dean of the Faculty gave me quite enough to do, although others did the actual class instruction. When we were taken over into the army, in April, we had the whole Sam Brown belt and all the privileges, but not the rank, of officers, and remained members of the newly created Army Educational Corps until discharged.

Unfortunately an acute attack of bronchitis completely laid me out in May, so that I was in hospital during the last weeks of the term, then transferred by hospital train to Savenay and to Saint Nazaire and only discharged after reaching New York.

Am picking up strength rapidly now, thank you, and here in Providence am taking up again the architectural practice and other interests that for a time have been laid aside.

So many incidents and events have occurred during the past year that it is hard to select the items to write about. But I hope that you will find, as I did, that, in spots at least, the year in service was well worth while.

Alec McKim certainly had tough luck. The 1916 class notes record his strenuous preparation activities and just when they were to bear fruit he met with his accident:

I have the record toss. I was drilling and studying and lecturing to go abroad with our army, being president of New York State Engineer Reserves which was six hundred strong, when along comes an engine and throws me three hundred feet and my poor car one hundred and fifty feet. For two years I have used a crutch and now I have dropped it and am ready for the front — the war is all over. Tough luck after General Wood assured me he would see that I was accepted in spite of my fifty-three summers.

Constance, daughter of Mr. and Mrs Everett Morss, was married October 15 to Gardiner Horsford Fiske of Boston. Miss Morss is a graduate of Radcliffe. Mr. Fiske was graduated at Harvard in 1914 and served with the 20th Aero Squadron overseas.

Ed Dewson writes that Frank Pickewell is not in good health and does not get away from his home in Englewood, N. J., very much.

Bob Richardson makes his headquarters at the Technology Club, New York, but is much of the time in the West looking after the interests of the Electric Bond and Share Company of New York.

Charlie Brown has been devoting considerable time to developing the manufacture and sale of a new slipper which he has designed, and which is working into popularity. It is called "Wooleather," and is now carried by the better shoe stores in the East.

Charlie Eaton was certainly a busy and very philanthropic bee during the war. We do not know how many good things he put over but every little while a new one comes to light. Director Gibbs of the Technology headquarters in Paris recently told of his substantial interest in the boys over there, and one of them said that perhaps the most appreciated piece of thoughtfulness were the mechanical lighters that Eaton provided for every Tech man abroad, when matches were very hard to get.

The secretary, and the class as well, is under obligations to Dick Pierce who has acted as secretary pro tem during the last two years, and particularly for the publication of The '85 Hustler this spring, with a complete class directory.

The class dinner, April 12, was one of the best of modern times. It was held at the Boston Athletic Club, and about twenty were present. Among them were Sid Williams, Nat Robertson, Ben Copeland and Charlie Richards. Frazer presided and in turn each man brought his autobiography up to date. The main business had to do with the 35th Reunion next year. A committee consisting of Pierce, Page, Brown and Litchfield has the matter in charge and it will be a whopper. It was also decided to have a "father and son" dinner this winter. This will be of the nature of an experience meeting, as many of the boys were in active service overseas. Charles Peirce, '86, was the guest of the evening. Charlie has a very strong feeling that there are a certain few Tech men who did not graduate who should be recognized with an honorary degree, because of their professional attainments in after life. The class unanimously agreed with him and it was suggested that the class start this movement among the alumni. It was also suggested that the class hold a dinner in New York this winter, a suggestion that had hearty support. Nat Robertson was elected president of the class.

Fill out and send in YOUR blank for the Technology War Record Book.

1887

Edward Galbraith Thomas, Secretary, 213 Floyd Street, Toledo, Ohio

Every Man's Job — Work for the Technology Educational Fund.

It is not given to many to so thoroughly enjoy all phases of one's life as did Fred Todd. Work and play, business and leisure, were carried on with energy, persistence and care, yet were alike viewed with a whimsical boyish zest, free from worry. He was a typical "good mixer," at ease in every environment, a fluent speaker with a remarkable ability for creating a vivid mental picture with his words. To us who knew him so well and whose acquaintance with his amiable, courteous and forceful character began so many years ago, the following "Memoriam" from the "General Electric Review" will strongly appeal:

Frederick Charles Todd, for many years connected with the General Electric Company, left a host of friends and warm admirers when he died on November 10, 1918, just one day before the armistice was signed.

During his long period of service with the Company the positions he occupied were many and varied. In November, 1888, he entered the Expert Course at Lynn and a year later he was an expert on "outside work." The year 1899 was one of rapid promotions for Mr. Todd; he successively became traveling inspector for the Railway Department, salesman for the Railway Department at the Home Office, and then was made manager of the Railway Department of the Northwestern Thomson-Houston Company at St. Paul.

In March, 1892, he was appointed assistant to the first vice-president and had his office in New York, and two years later, in 1894, he was made manager of the Middle Atlantic District and moved his office first to Washington and afterwards to Baltimore. He held this latter position for nineteen years and in 1913 he resigned as manager and was detailed to special duty.

Mr. Todd did not enjoy robust health and in 1916 he was invalided from duty for a year by the doctor's orders.

In 1917 he was in the saddle again, but this time he was serving his country, in the office of the Naval Intelligence, where, although we have no record, we know he did meritorious work. These activities took him as far afield as Canada and the Hawaiian Islands where he carried out valuable investigations for the Government.

The above cold record of facts tells that Mr. Todd led an active business life and that he held many positions of responsibility. What his friends love to talk about concerning the subject of our memoriam is, however, the man himself, as a lovable and faithful friend, as the charming and affable host, and as a companion never to be forgotten, and, above all, as an intense lover of nature.

Yes, Mr. Todd loved nature, revelled in it, and while he was a busy man, he strenuously refused to let business be the master of his destinies. He mastered his share of business, made a success of it, but, at the same time, he learned of "better things" through an intimate contact with nature herself. He loved flowers better than machines and congenial companionship, in his wonderful cabin home, better than dollars.

Mr. Olivier, in the BALTIMORE NEWS, while Mr. Todd was still alive, wrote a beautiful editorial tribute to him. We might write much about Mr. Todd, but will refrain as we cannot do better in friendship's name than just quote the concluding paragraph of Mr. Olivier's article, and then leave the memory of Mr. Todd in the safekeeping of his friends' happy recollections of those hours spent with him in the presence of nature.

Mr. Olivier said: "In the work-a-day world we are very prone to lose our sense of proportion, and it is men like "Fred" Todd who steady us when we are about to fall and help us keep our poise. They point out the glory of the hills and valleys, the romance and the joy of the great outdoors, the hollowness and dullness and oppressive stupidity of downtown. While just as keen and just as aggressive in business as any of us, down in their hearts they laugh at all the struggle and turmoil and hot pursuit of unimaginative wealth. Dollars, after all, are such ugly things beside the first arbutus."

Todd was a native of New Brunswick. He was a student in the Mechanical Engineering Department, but left the Institute for the business world after three years. He was our third class president, belonged to the Society of '87, and to the Hammer and Tongs. Mrs. Todd survives him and, I believe, one daughter.

Fill out and send in YOUR blank for the Technology War Record Book.

1889

WALTER H. KILHAM, Secretary, 9 Park Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

J. Parker B. Fiske is now President and General Manager of the Frigidaire Corporation, manufacturers of the best possible refrigerators, and also of the Sunnyhome Electric Company, which manufactures domestic power and lighting plants. Both of these are divisions of the General Motors Corporation of Detroit.

The degree of Doctor of Science has been conferred on Zenas W. Bliss, Chairman of the Rhode Island State Tax Commission by the Rhode Island State College. In speaking of Dr. Bliss' achievements, President Edwards said:

> Zenas Work Bliss — town council president, legislative leader, lieutenant-governor, chairman of the State Tax Commission, vice-president of the National Tax Association: wise and trusted public servant, learned and honored councillor in the science of economics and finance; to you it has been given scientifically to order the perplexing taxation system of your State, so as to produce adequate revenue without disaster, to enlist the support of your fellow citizens without favoritism, and to commend your methods to the study and emulation of other State governments throughout the nation. The State through us today honors one of her trusted sons.

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1890

GEORGE L. GILMORE, Secretary, Lexington, Mass.

Every Man's Job — Work for the Technology Educational Fund.

> "TO ALL PARTIES INTERESTED IN THE OPERATION OF VESSELS AND MOVEMENT OF CARGO:
>
> Following the resignation of Mr. Herbert B. Ehrmann, the United States Shipping Board has appointed Mr. Darragh deLancey as Director of the Marine and Dock Industrial Relations Division.
>
> The work of the Division will be continued under Mr. deLancey's direction. May I ask for Mr. deLancey the same courtesy and co-operation which you have extended to his predecessors?
>
> Yours very truly,
> R. B. STEVENS, Vice Chairman."

George E. Hale, who has been chairman of the National Research Council for the past three years, has resigned his position and returned to California, where he has been made honorary chairman, as a reward for the great work that he has done. — Capt. C. H. Alden, who has been abroad for the past ten months in France, arrived in this country August 19. — Herbert C. Tuttle's address is now, No. 559 Vernon Avenue, Long Island City, New York.— John O. De Wolf, of the John O. De Wolf & Company, engineering and mill architects, has removed to No. 45 Bromfield Street, Boston.

A card was received from deLancey in July, from Quebec. Darragh and his family were enjoying their first real vacation in two years, as he has been tied up in Washington since the war opened.

The address of Schuyler Hazard is now reported as, Room 11, Clark-Keating Building, Cumberland, Maryland. We have not heard directly from Schuyler, and so are not aware as yet whether this is a permanent residence, or a temporary business residence.— Elton D. Walker's address is now, 215 South Atherton Street, State College, Pa.

Lieut. John B. Blood, who has been senior lieutenant on the U. S. " Kwasind," has finally been demobilized and is now at his home at 248 High Street, Newburyport, Mass.

Cards have been received announcing the marriage of Frederick Worcester Swanton and Miss Margaret Elizabeth Covey, Saturday, August 23 at Brookline, Mass. Fred and Mrs. Swanton will be at home after November 1, at 1511 Irving Street, N. W., Washington, D. C., and will be glad to see any of the boys of the class at any time they are in Washington.

Through an error in the last issue of the Review, Jake Noyes' name was omitted from the list of members of the class who attended the alumni dinner this year. It was surely an omission, as Jake was there in every sense of the word.

G. L. Gilmore returned on the " Rotterdam " from Europe, arriving in New York, July 22. He was a member of the European Cotton Commission, and the commission was most successful on its trip, and as a result about two hundred delegates from Europe will attend the World Cotton Conference at New Orleans, from October 13 to 16.

While on the continent, the commission was most favored in opportunity to visit the battle front and devastated regions. In Belgium, they were given a two hundred mile ride over the front, by the Belgium government. Arriving in Lille, French cars were provided, and a further trip over their devastated regions followed. While in Paris, American cars were furnished, and a trip was taken over the Marne, out to Belleau Woods, Chateau-Thierry, and Soissons.

The commission divided its work after finishing its meetings in Paris, and your secretary with one of the other members, went to Switzerland and Italy, and returned to Paris, and were fortunate enough to be there on the day that the peace was signed, and had tickets to the Terrace at Versailles on that day, which made a most interesting trip.

While in Paris, your secretary had the pleasure of meeting our classmate, Billy Poland, who is the head of the Commission for Relief in Belgium and Northern France. Billy has been doing wonderful work for the past four years in Europe, but the commission is now rapidly closing up its duties, and we hope to see Billy back in the States before long, and trust that he will be with us at our thirtieth anniversary next June.

The following article appeared in the monthly proceedings of the "American Society of Civil Engineers":

HONORS FOR GEORGE ELLERY HALE

George Ellery Hale, Director of the Mount Wilson Observatory and Foreign Secretary of the National Academy of Sciences, who has been for the last ten years a Correspondent of the Academie des Sciences, Institut de France, has received the unusual honor of election as Associe Etranger, taking the place of Adolph von Baeyer, declared vacant by the Academy. The Foreign Associates are limited to twelve, and the high distinction has been held by only two Americans — Simon Newcomb and Alexander Agassiz.

"The National Research Council," upon the presentation and acceptance of Dr. Hale's resignation as its Chairman, and the election of James R. Angell as his successor, created and bestowed in perpetuity upon Dr. Hale the title of Honorary Chairman, in recognition of his services to the National Research Council and to Science and Research by indefatigable efforts that have contributed so largely to the organization of science for the assistance of the Government during the war, and the augmentation of the resources of the United States through the newly intensive cultivation of research in the reconstruction and peace periods that follow.

Miss Elinor Nims, daughter of Norman G. Nims, graduated from Vassar College last June. We are wondering how many more of the daughters of the members of the class have already received their degrees.

You have probably heard of the latest proposition of the generous, but unknown, "Mr. Smith."

His latest offer is to make the Institute a gift of four million dollars, if we of the alumni will raise a like amount. This gift is contingent upon our raising three million dollars by December 31.

It is up to us all now to act as committees of one, to see what we can do for Technology. The part taken by Technology in the great war has brought more publicity to the Institute than to any other institution of the world. There were more than twenty-six hundred of our alumni in uniform, to say nothing of the thousands in other government work. From our own class there were seven in uniform, and others giving most all of their time. It is up to us now to give further service in the form of time and money, for the benefit of the future of the Institute.

You will receive notices of the plans, but meanwhile do not forget it; and any of your industrial friends of means, who have had occasion to use Tech men or the Institute, should be told of the needs of Tech. It is hoped that the alumni can raise six million dollars, and if so, Tech will be on Easy Street for the future, and we shall feel that we have all helped to do a grand, good work.

At the September Proceedings of the American Society of Civil Engineers, the following notice appeared, relative to W. B. Poland. It is evident from this that we shall not have Billy back with us in the near future, but trust that he may return in time to be with us at our thirtieth anniversary reunion next June.

William B. Poland, Member, American Society of Civil Engineers, Director for Europe, Commission for Relief in Belgium, has been named as a member of the American Mission, headed by Major-General James G. Harbord, which is to investigate conditions in Armenia and Transcaucasia.

Fill out and send in YOUR blank for the Technology War Record Book.

1891

Henry A. Fiske, Secretary, 275 West Exchange Street, Providence, R. I.

Every Man's Job — Work for the Technology Educational Fund.

Dave Ambrose's elder son has entered Annapolis Naval Academy. Dave is quite active in the Boston Civil Engineering Society.

Bert Kimball is back in private engineering work, and finds business is good, particularly in the pulp and chemical industries.

Charles W. Whitley has recently moved to New York City, and is now vice-president of the American Smelting and Refining Co.

Charles Wetherbee writes from Bath, Maine, that he is still on the same old job building boats. During the war his company built and delivered eight destroyers, and they are completing three more. Some ninety other destroyers were built from their plans by other concerns.

Morrill Ryder was renominated, without opposition, as a candidate for membership in the Massachusetts House of Representatives.

George Hooper is back in engineering work. While in the Ordnance Department, he was promoted to the grade of lieutenant-colonel.

The secretary wrote Fred Moore of Hartford, and, as usual, he said that he had just returned from fishing, but, as unusual, said that he didn't get any fish.

Fill out and send in YOUR blank for the Technology War Record Book.

1892

GEORGE H. INGRAM, Secretary, 2052 Cornell Road, Cleveland, Ohio
C. H. CHASE, Assistant Secretary, Tufts College, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Word has been received of the death of Miss Harriet Heywood, daughter of A. S. Heywood, '92, of Worcester, Mass., by automobile accident July 14 at Fisher's Island, opposite New London, Conn. Our brother Heywood has lost his wife and also a son in recent years and the sympathy of the class goes out to him.

Professor Charles F. Park of the Massachusetts Institute of Technology was director of the technical training at the Junior Plattsburg, which opened July 1.

Fill out and send in YOUR blank for the Technology War Record Book.

1893

FREDERICK HAROLD FAY, Secretary, 15 Beacon Street, Boston, Mass.
GEORGE B. GLIDDEN, Assistant Secretary, 551 Tremont Street, Boston.

Every Man's Job — Work for the Technology Educational Fund.

No report has been received from the secretary.

Orton Wheelock Albee, Course III, died in Marlboro, Mass., on August 4, bringing to a close a career of unusual interest.

Immediately after being graduated from the Institute in 1893, Mr. Albee went to the Midvale Steel Works at Philadelphia to work under the then Captain D. A. Lyle '84, inspector of ordnance, who was made a colonel later on. Mr. Albee spent several years in the ordnance department under Captain Lyle, and then, shortly before the Spanish war, went to Newark, N. J., as superintendent of the ordnance department of the firm of Benjamin Atha & Illingworth. During the Spanish War he had charge of ordnance and equipment of the auxiliary cruisers " Harvard " and " Yale." After the war he was for a time at Chester, Pa., in steel foundry work, then he went to Detroit, Mich., as associate of C. C. Bothfeld, '84. While he was in

Detroit the report was spread about that there was an enormous deposit of silver in Ontario,—before Cobalt had been established. With the first sign of fair weather in the spring, a party of four, including Mr. Albee and Mr. Bothfeld, went to Ontario on a construction train. He found a rich vein at Cobalt, and established a mine there, which he sold out after a year and a half, when Cobalt was at the height of its prominence. He returned to Detroit and carried on a practice as consulting engineer on steel structures until the United States entered the world war.

In July, 1917, he entered the Ordnance Department as a major. While he was consulting engineer in Detroit he had built up an engineering practice in Canada as well as in the United States, and had a wide acquaintance there. Consequently he was sent to Canada in charge of all United States munitions plants. The government had $400,000,000 worth of contracts for munitions in Canada, and Major Albee had complete charge of all contracts. At the time of the armistice $300,000,000 worth were still in force, and since these contracts had been placed in a foreign country, Major Albee, later being promoted to lieutenant-colonel, was made personal representative of the Secretary of War, and has been engaged in the adjustment of these unfinished contracts ever since. His work involved tremendous responsibility and he wore himself out until he had to take a rest at the end of June. He came east to Marlboro on sick leave to visit his sisters in the latter part of June. Some time ago he underwent a surgical operation, and while he survived about six days, his vitality was so low that he finally succumbed. His death came while he was still in the service, and he gave his life for his country just as truly as the soldier on the battlefield of France.

Mr. Albee was very active in the Technology Club of Detroit, was a past president of the Detroit Engineering Society, and a member of the Masonic fraternity. He leaves a widow and one daughter, Miss Dorothy, and two sisters, Mrs. Sumner P. Willard and Mrs. Frederick W. Pratt. He comes from an old New England family, his father having served in the Civil War.

He was an intensely loyal man, popular with his associates, and the best type of American. His example was of immense value to his force. He had under his charge fifty officers, a hundred enlisted men, and twenty-six hundred civil force, inspectors, clerks, and stenographers. The responsibility that was his required extraordinary executive ability and tact, and his success was due to the force of his own example.

Fill out and send in YOUR blank for the Technology War Record Book.

1894

S. C. Prescott, Secretary, Massachusetts Institute of Technology,
Cambridge, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Claflin has recently returned from a business trip to Europe in which he traversed a considerable portion of France and Germany. His views on present conditions would be most interesting at this time and an attempt will be made to get a letter from him for the next Review. He is at present on a business trip in the West.

McKibben has taken up his work at Union College as professor and head of the department of civil engineering.

Thorndike's address has been changed to 15 Beacon Street, his firm (Fay, Spofford & Thorndike) having moved to that location during the early summer.

Major Isaac Weil has been discharged from the army and is now located at the Farmers' Bank Building, Pittsburgh.

Gardner has won deserved recognition and is now in charge of the work in design in the department of architecture at the Institute.

Dukes is a professor at Purdue University. King is on the corporation committee of the Tech Endowment Fund in New York, working hard to secure the millions necessary to obtain Mr. Smith's promised contribution. Let all get together and help him. The class committee will " issue an appeal " shortly. Let no millionaire remain unforgotten, and incidentally give as well as get.

Fill out and send in YOUR blank for the Technology War Record Book.

1895

Wallace C. Brackett, Secretary, 105 Washington Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

An outing and dinner for the Class was scheduled for July 10, 1919, at the Wollaston Golf Club. A heavy storm prevented any golf, but the following men appeared at the dinner: Booth, Barrows, Winthrop Parker, Andy Fuller, Gus Clapp, Wengren, Rockwell, Schyler Clark, Roger Williams, Chase, Brackett, Hannah, Richards and Winkley. The meeting was held primarily to discuss necessary action and make preparation for '95's twenty-fifth anniversary next year.

In accordance with a vote of those present the president was authorized to appoint a committee to initiate and carry out reunion plans and particularly and immediately with respect to a Class Book.

The committee was appointed by the president and consisted of Rockwell, Fuller, Whorf, Hannah, Winthrop Parker, and Barrows with the president and secretary, ex-officio, with the understanding that the committee was to be enlarged later. At a meeting held at a later date, the committee voted to send out notification to the class concerning the reunion, which circular was mailed to all members for whom we had proper addresses on August 6, 1919.

As but very few copies of the announcement were returned to the secretary, it is assumed that each member received his copy. If such is not the case, the secretary would be pleased to know it and will be glad to forward a duplicate.

Briefly, the class intends to hold a week-end outing just before the general Massachusetts Institute of Technology reunion which will probably take place during the week beginning June 7, 1920, at some convenient location (not yet selected) at which we hope to have a large attendance. The class will also issue some sort of a Class Book which it is hoped will be ready for distribution at this time.

The appeal for funds for publishing the Class Book has met with a very generous response from a limited number of men. The response, however, has not been as general as it should be. The amount subscribed has not been as large as it must be, to make this book worthy of '95. More cash, either as subscriptions or contributions, is needed to warrant the right kind of a book. Out of a total mailing list of two hundred and sixty-eight, replies have been received from only sixty-one. Those having not yet sent in their cards are requested to send them in at once, so that the committee may know what to count on. This will also lessen the amount of work for the committee, which is large at best.

A meeting of all the '95 men in and around New York is scheduled for October 15, 1919, at which time full details as already worked out by the committee will be presented and additional members from the New York contingent will be added to the committee.

Within a short time, questionnaires will be sent to all members of the class asking for data to be used in the Class Book. We urge each member to fill out the card and RETURN at once. This is very important.

There are a number of names consisting of graduates in 1895 and also of others who were members of the class for a longer or shorter period, for which we have no addresses. These names are given below. Any information relative to their whereabouts should be sent immediately to the secretary.

The elaborate "Victory" pageant successfully produced at Fort Banks, Winthrop, for the benefit of the United States Army Relief Society on July 4, 1916, was written by H. C. Whorf, '95. It was estimated that 10,000 people saw this production, which it is said compared favorably in effect with "Caliban," presented several years ago at the Harvard Stadium.

John D. J. Moore, at the present time Conservation Commissioner for the State of New York, is and always has been a loyal supporter of the Irish cause. A recent issue of the "Literary Digest" shows a picture of Eamonn de Valera, the "President" of Ireland, with several American friends, among whom is John.

The death of Mrs. Helen L. Stork, wife of Stork, '95, a lieutenant in the navy, was noted in a recent issue of the Boston papers.

Haven, '95, who is associated with Crosby, '94, in the firm of Haven & Crosby, architects and engineers, in the Scollay Building, has made a specialty of candy factories. At the present time, he is engaged in the design and construction of several large plants of this sort in Boston, New York, Chicago, Buffalo and Philadelphia.

Huxley writes that he has recently returned from a business trip which took him through France, England, and Spain, and that while in France he took a three-day motor trip into the battle region. Since his return, we understand that he has had an operation for appendicitis, but is now practically recovered.

A letter from Morey states that during his stay in Texas and while engaged in building ships for the Government, he had a visit from Major Ames who made an inspection for the Coast Artillery. Swift also made an appraisal, and Masters camouflaged his ships.

Howard writes that he is the chief engineer of the Union Switch and Signal Company, one of the Westinghouse Companies, and that he has been with this company since 1905. Their business is the design, manufacture, and installation of railroad signal apparatus and system.

Defren is now located with the Avery Chemical Company of Boston.

The secretary wishes to again call attention to the fact that in order to have plenty of '95 news in these columns, it is necessary for all to answer letters and forward data. To twelve letters sent out, only four answers were received.

Missing addresses in '95. Please send them in to your Class Secretary.

Louis M. Allison, Louis P. Andres, Miss May Banta, Francis N. Bardwell, Herbert E. Bishop, George L. Bixby, Charles N. Blanchard, Miss Mary Bradley, Captain De Nise Burkhalter, Harry C. Burnham, Robert M. Cannon, Omar H. Carrier, Litchfield Colton, Harry W. Cotton, William F. Craig, Eugene B. Crockett, Joseph W. Cushing, Miss Gertrude P. Davis, Stanton K. Davis, Edward M. Dexter, Judson

C. Dickerman, Albert G. Eastman, Gilbert J. Egan, Francis T. Estes, Robert D. Farquar, Fred L. Felton, Harold G. Fitts, Charles H. Foss, Phillip A. Fowler, Miss Harriet E. Freemen, Elwood S. Gatch, Ira B. Goodrich, Mrs. Robert Greenwood, Williston W. Greenwood, Frank E. Hall, Charles A. Hamden, John E. Hamlen, Miss Annis L. Hanchett, James J. Hawley, Peter E. Hellwege, Mrs. Thomas Hibbard, Paul F. Jacobson, Charles H. Johnson, Cyrus F. Johnson, Frank W. Kendall, Walter H. Kleinpell, Dorville Libby, Jr., Charles E. Lockwood, Andrew J. Logan, Miss Helen W. McElwain, James Madison, William F. Mahoney, Fred H. Marvin, Miss Mary C. Metcalf, Dennis W. Murphy, John F. Murphy, Arthur B. Newman, Wesley A. O'Leary, Harry O. Parker, William H. Parker, Robert F. Pauli, William B. Platt, Frederick W. Potter, Gaio G. da S. Prado, Plinio da S. Prado, Frank J. Pratt, George W. Priest, Lee M. Raney, W. S. Rhodes, John A. Roche, Adolph G. Roeth, Captain Harry J. Sheafe, Arthur B. Shepard, William B. Smith, Frank Snow, August C. Stock, George F. Sweetser, C. Chester Taft, Ellis C. Thayer, Frank A. Thornley, John H. Thurber, Ross True, Arthur P. Vandenbergh, Karl Weatherbe, Luis G. Whitaker, Harold B. White, Louis G. Whittier, William H. Wills, Andrew N. Winslow, W. Connor Witherspoon, Philip H. Withington, Frederick C. Fitz.

Fill out and send in YOUR blank for the Technology War Record Book.

1896

Charles E. Locke, Secretary, Massachusetts Institute of Technology,
Cambridge, Mass.

J. Arnold Rockwell, Assistant Secretary, 24 Garden Street, Cambridge, Mass.

Every Man's Job — Work for the Technology Educational Fund.

After a long silence, the secretary has heard from Lloyd Lamborn, who is editor of the "Chemical Age," 20 Vesey Street, New York City. This is a comparatively new journal devoted to the chemical industry and especially to its commercial side.

Incidentally, Lamborn is able to say a good word for Technology with the idea of promoting the financial drive. The issue of September 10 contained an editorial pointing out the needs for money at Technology and in the issue of September 25, Lamborn has given space to the article by John Ritchie, Jr., on the wonderful work that Technology has done for the chemical industry in the past.

While the war is over, it is nevertheless perhaps not too late to speak of the work done by A. L. Drum in connection with the housing problems associated with the various shipyard districts. He acted as transportation engineer of the Shipping Board and his work was apparently to deal with the problem of transporting the shipyard workers from their place of employment to their homes.

This work involved personal visits and traffic surveys at all the shipyards, including Savannah, Newport News, Baltimore, Sparrows Point, Camden and Gloucester, N. J., Newark Bay District, Staten Island Shipyards; Groton, Conn.; Newburg, N. Y., Port Jefferson, L. I., Fore River, Squantum, Portsmouth and Bath, Me. This made a total of twenty-eight shipyards, involving transportation service problems for more than two hundred thousand men and requiring at least five thousand carloads of workmen per day.

The secretary wishes to put in a plea that '96 men give prompt attention to the request from the War Records Committee for information regarding the civil and military activities which every Tech man had in connection with the war. These form the basis of the book to be published to record the achievements of Technology men. Unless every man does his share, the book cannot possibly be a success. Perhaps a lot of the men are under the impression that because they did nothing startling they need not send a reply. The point to be emphasized is that a reply is desired from EVERY MAN no matter what he did, and even if he did nothing.

Dr. Rockwell got into harness immediately on his return from France. He had not planned a vacation, but did finally see his way clear to get away to Tennessee for a short trip in September. He is now back on his old job as medical adviser to Massachusetts Institute of Technology students which work he carries on, of course, in addition to his regular practice.

Henry Cummings, president of the Henry Cummings Contracting Company, in Boston, has had charge of large additions being built to some Massachusetts institutions. At the Pierce Farm, this work has gone along very successfully with the exception that labor troubles have held up the work somewhat. The men claim that the superintendent was objectionable. It came down to the question of whether Henry would retain a valuable superintendent or would have a strike and he chose to stick by his superintendent, which would seem only right and just.

Mail has been returned from H. J. Poppenhausen, and the secretary will be very glad to get clues as to his whereabouts.

Lionel C. Robertson's new address is care of Tobey Furniture Co., 33 North Wabash Avenue, Chicago, Ill.

Frank Guptill, having returned from France and having been demobilized, is now to be addressed at the Engineers' Club, Boston, Mass. He has found time to supply the sequel to his story of his trip to France and the following completes the narrative through to his demobilization:

> The lay mind naturally assumes that going to war means going into the thick of it where shot and shell are flying about and where the chances are that one will be killed rather than return alive. With the public mind adopting this conclusion even before it was arrived at, it was quite conceivable that the enlisted personnel of our regiment, which had so recently been a part of the public and which almost "en toto" had had no military experience, should foster the same idea. Even the officers who only knew what was to transpire from day to day as they received their orders from the powers that be, had somewhat the same opinion.
>
> We did not know then, as we know now, that every soldier who is merged into the grand army total has only six chances out of ten of ever reaching the firing line. I say ONLY six, perhaps this may seem enough to most, but nevertheless it is cutting the percentage to a very appreciable extent and means that for two million men under arms, eight hundred thousand of them will be employed in some other way than shooting or stabbing the enemy.
>
> Small wonder then that the 34th Engineers, having become accustomed to entertaining the fighting idea and maintaining that state of mind wherein they could expect and meet the worst, had a tremendous let down when they found that they were to be stationed at Gievres, employed in depot and shop work and relieving the 24th Engineers who were to go forward with the First Army. Also for all the preconceived ideas of glories won on the battlefield, of going over the top, of throwing a bridge across some brook under a steady rain of Boche shells, of rounding up machine gun nest crews and bringing them into camp tied to a string and numerous other such little details. It was not to be.
>
> As the days went by and the men became more to understand the kind of work they were doing and how it applied to the whole scheme of warfare, the feeling that they were out of it began to wear off. They heard of many other places and positions where troops were doing similar work. They began to fill priority orders for the fighting troops, for equipment, for material for defence construction and repair work and numerous emergency orders where the items called for were hastened forward by couriers in motor cars and trucks and they began to understand and realize how essential it was that their part in the great campaign should be carried forward in as expeditious and thorough a manner as possible. That no matter how brave the fight-

ing line was, without their co-operation in getting forward the requisites for maintaining the routine, all efforts would be in vain. And so they did their work and they did it well, and this work was called the Services of Supplies.

When a young man has been brought up in a temperance town and isn't much of a drinker anyway, he takes it quite as a matter of course, after being initiated into the " what you can do's " and " what you can't do's " of army life in the States, to find that the area within a five mile radius of the camp is dry and that he isn't supposed to drink anyway. Imagine then, the bewilderment of said young man on being transported to the neighborhood of a small town in France and finding on his first pass out of camp that he not only could buy all the wine he wanted to drink, but that probably no one would say anything to him if he got enough in which to take a bath—providing—that he returned to camp in a condition strictly becoming a soldier.

Alas, this provision was not always borne in mind in the earlier stages of becoming acquainted with French life, but the situation cleared of itself as time went on. " Vin blanc " and " vin rouge " undoubtedly take their places among the memories of the American sojourn in France and in years to come the mention of either will cause many a grey-haired man to grow reminiscent.

This war has given our younger citizens an opportunity which probably a larger majority would never have had otherwise and may never have again. I mean in giving them a chance to see something of foreign lands and customs and thereby gaining a broader viewpoint. Two years ago if some mountaineer from Kentucky had been asked how he would like to take a trip to the Riviera he might have replied: " Where mought that ere place be, stranger?"—and yet there they were!—the tall, lanky lad from the Kentucky hills, with a slight slouch in spite of his military training; the corn fed husky from the flats of Kansas; the slight built youth whom we knew from his drawl was from down Alabama way, and all the others, strolling with a nonchalent air along the esplanade in Nice, motoring to Monte Carlo, visiting the Casino and everywhere taking possession, in a matter of fact way, of one of the most wonderful playgrounds in the world and one that had been held sacred to the use of princes, dukes, counts and whatnots from times immemorial.

Along in the spring of the year the entertainment committees got in their good work and so successful were they in promoting athletic events and staging a series of entertainments for the troops that the men became quite resigned to waiting their turn for embarkation. The fever broke out again however, along the last of May, when rumors had it that the camp was to be abandoned in a hurry and so along in June part of the regiment was selected for what were to be the last rites on foreign soil.

For my part I was ordered to St. Nazaire for convoy duty, going from St. Nazaire to England, where during a stay of ten days, I was enabled to see considerable of London and the surrounding country. American uniforms had become so scarce there at that time as to be quite a curiosity. My landing in New York on July 26 was uneventful, followed by an equally uneventful trip to Washington. About two weeks later, August 14, I received my discharge at Camp Devens.

'96 men will mourn the loss of Dr. Mortimer Frank, the famous eye specialist of Chicago, who died of apoplexy last April. While officially designated as '97, he was closely connected with '96 and in fact, kept up his class dues in '96. Detailed account of his life was given in the last issue of the REVIEW under '97 class news.

The secretary has been in correspondence with our old friend Chapman, at Saybrook, Conn., looking toward some arrangement whereby Chapman could look after us on the occasion of our reunion next June. Nothing has as yet been decided. Chapman would like very much to care for us, but he is not sure that he has the facilities.

Some of the fellows have supplied information to the secretary regarding their war work which is of especial interest; for example, Walter Stearns wrote as follows:

My own connection with war work consisted of acting as Chairman of the Electric Heating Device Committee of the General War Service Committee of the Electric Manufacturing Industry.

The chairmanship of this committee required a number of trips to Washington to appear before the War Industry Board and also involved a lot of hard work which really amounted to little as the armistice was signed before the plans made by our committee went into effect.

Mr. Rockwell has nothing on me so far as titles are concerned, as I nearly accepted the appointment of a major in the Ordnance Department, but it was finally decided that the work I was doing with the War Service Committee was of more importance than the Ordnance Department position."

Myron L. Fuller reports from Dallas, Texas:

I gave up consulting work in the fall of 1917, and took the position of chief geologist for the Sun Company, a corporation devoted to the production, refining, and transportation of oil, as well as to the building of ships, mining of manganese and coal, the development of timberlands, and other minor industries.

On taking charge of the work, I organized a geological department of about fifteen geologists, including F. H. Lahee of the Geological Department of Massachusetts Institute of Technology as my chief assistant. We have carried on investigations in Honduras, Argentine, Cuba, and Mexico, in addition to our examinations in the United States.

The chief work has been in the new Ranger fields of Texas. We have drilled seventy-five wells of which nineteen were dry and fifty-six paying oil wells ranging from ten to ten thousand barrels per day. At the present time, we have about one hundred and twenty-five wells drilling, a large percentage being on locations made by the Geological Department. The principal field office is at Dallas, where we have two floors of the new American Exchange National Bank Building.

We have refineries at Yale, Oklahoma, Toledo, Ohio, and Philadelphia. Our fleet consists of twenty or more ships engaged in transporting oil from Texas to the refineries at Philadelphia, and in carrying the oil to the Allies in Europe. Three of our ships were sunk by submarines during the war, fortunately without loss of life, and many others had very narrow escapes.

We have several wells on the sand this week which, from their locality, should come in at a thousand barrels or more apiece.

Con Young, while lingering in Washington, wrote:

I have always had a very warm and kindly feeling for Johnny Rockwell, as I am sure all '96 men have, and a great many other Tech men. I do not know of anything that would have given me greater pleasure than to have been with those of you who were fortunate in being with him at the dinner and in a position to warm up to his genial smile and listen to his tales of valor and service with the overseas forces. The only thing I regret is the fact that the notice came to my attention after the date set for the dinner, therefore I could not even be with you in spirit.

The strenuous work of the special war conditions in Washington vanished about the first of January and with it George Merryweather, Charlie Stamp, M. C. Tuttle, two of the Smyser brothers and two or three other '96 men have vanished from the district.

Joe Clary is now the main " kick " as head of the division of Drafting and Design in the Bureau of Construction and Repairs, Navy Department. Reuben Bakenhus is assistant chief and a great part of the time, acting chief of the Bureau of Yards and Docks, Navy, and also general head of shipping yard facilities with the Shipping Board. This causes him to spend part of each week in Philadelphia and the remainder in Washington. The other '96 men who are resident in Washington seem to be running along as usual.

I was acting as special engineering representative of the Armstrong Cork Company through the war period. My work for the company combined with voluntary work for various Government departments kept me going most of the time, excepting a few hours each night which were taken out for sleep. I have decided to stay here and am now continuing to look after the company's business which is not quite so strenuous as it was last year. In addition to this, I expect to take on other accounts as sales engineering representative for various industries.

Francis N. Miller, Course IV, wrote from Deland, Florida:

It is my hope in the near future to make a pilgrimage to Boston as I have not been there since the new buildings for the school have been erected.

Owing to a severe illness it was necessary for me to give up my practice of architecture in Pittsburg, Pa., and move to a warmer climate and have been located in the land of perpetual sunshine and eternal summer for the last six years.

There is plenty of work here and the field is not at all crowded and am pleased to say that I have been busy and the prospects look promising.

I find some very clever architects in Florida who are members of the Florida Architects'Association and men who are serious and take a deep interest in advancing the character of work in our State.

Through the kindness of Joseph N. French, Secretary of the Detroit Technology Association, the following account is given of Maurice Black, whose death was noted in the last REVIEW:

Maurice Black, after leaving "Tech" spent a year at Leland Stanford University. From there he went to join his father in business at Toledo, Ohio. I understand that his father is in the garment business. After spending two years with his father, he came to Detroit and associated himself with L. Black & Company, a very old substantial firm of opticians and general jewelry retail store. He worked up his interest in this business until he became the sole owner in 1907. He was married in 1906, and leaves his wife, with three children, two girls, eleven and one-half, and eight years of age, respectively and a boy, seven years of age. Maurice Black died of acute liver trouble, at the age of forty-four years. He was on the point of giving up his business and taking his family on an extensive trip, covering various university towns, with the intention of educating his children along these lines. His death was very sudden, as he had always been in the very best of health.

I cannot find that Mr. Black had any other interests outside of his business, except for his home. He was very well known by all classes of people and was very much interested in the welfare of the city. He was never critical and always looked for the best in his employees, even condoning serious mistakes that they made. His interest in his business was so great that he became an expert mechanic in connection with his jewelry work and an authority on lenses. His family have been left in very comfortable circumstances and his wife is deeply interested in his business and is continuing same with the hopes of giving the children something to do in the future.

Walter Leland writes from San Francisco:

I am just this morning back from a trip to Yosemite, and it seems rather strange that with several thousand people in the valley, there were only two I met whom I had ever seen before and they were Professors W. Lyman Underwood and William P. Sedgwick. On the first evening of my arrival, I dropped around to the open air entertainment to see what was going on and you can imagine my surprise when Underwood was introduced. As he came off the platform, I spoke to him and learned that Sedgwick was also there. He spoke on the following evening. There has nothing alarming happened in my checkered career. For me, naval architecture seems to have become a dead science. I have been engaged, almost exclusively, in power plant work and have installed a number of power plants, chiefly for the food preserving industry and altogether have had a very busy time for the last two years. Lately, I have bought out the major interest of the Leonard Refrigerating Company who have the license rights to manufacture refrigerating machines under the Leonard patents in the six states of the Pacific Coast, and I am very busy getting these machines on the market. We make them small enough for family size, but have not attempted anything, yet, larger than two-ton capacity. There seems to be a tremendous demand for machines of this sort, and I anticipate an active future.

Ernest E. Mead, likewise in San Francisco, has sent along the following breezy effusion:

Like many another of the fellows, I remember that I am a '96 man about six times a year. Why six? Because about that number of times we read class news or get a "Mansfield jolt." I fancy that many of us make and break a good resolution, just about that often. For once I have held the thought long enough to let it get over.

About a month ago I had lunch with Charley Hyde and when he confessed that he was almost as bad an actor as I am on this long silence business, it took away almost half my shame, and kept the thought alive.

Well, let's get to the mutton. After my last visit with you-all (Senior class dinner), I went back to sea for about ten years in the United States Revenue-Cutter Service. There I did a whole heap of sailorizing and some considerable soldiering.*

*Slang.

During this period, aided by that beautiful blue uniform and the gold stripes, I fooled an otherwise clever girl into marrying me, and I am still filled with amazement.

I slipped out of the uniform, and the sheltered life, in 1910, and started to demolish the entire structure of a certain section of the San Francisco business world by making and selling building materials in an already over-crowded competitive market. Usual result: large eruption, much falling debris, I'm squashed.

After a period of re-orientation I found myself with the Nobel Electric Steel Company, as a sort of quasi-technical Poo-Bah, thoroughly hated by a number of better men who had to report their occasional failures to me and take the tongue-lashing. It has been a great experience from the educational point of view. The education being mostly in how far one can keep away from accepted metallurgical practice with an electric furnace and still get results.

In the course of events the Nobel Electric Company degenerated from a fine experimental electro-metallurgical activity into the status of a "war-baby"; but it was a good baby and died young, mourned, I hope, by a portion of the technical fraternity.

For those interested in vital statistics, I might add that there are four kids, three of them girls, and that I am most gloriously "chicken-pecked."

This is degenerating into an epistle, Mr. Secretary, so I will clip it. I hope the gang gets together next year in such numbers as to add another record to the old ones. I will be with you if I can, but as you can see, the future is a little too nebulous for any very definite planning on my part.

Charley Wentworth has written on a letterhead marked as follows:

FONDATIONS, CONSTRUCTIONS, TRAVAUX PUBLICS
SOCIETE ANONYME AU CAPITAL DE 4,000,000 DE FR.
PARIS (VIIIe)
16 RUE DE LA PEPINIERE

I have been in Paris since the first of March and at present have several contracts for reconstruction work in the Vosges district of Alsace. These cover the building of cotton mills which are of first importance in order to provide employment for the people in that district. They were destroyed by the Boche with sledge-hammers a great deal more than by shell fire, and all brass, copper and babbitt metal in the bearings was taken to Germany. As this was in the German part of Alsace it shows how much interest they have in people who are subject to their domination. All the houses were stripped of furniture or it was broken up together with the floors and doors of the houses for firewood. Reinforced concrete machine gun emplacements were built inside the houses and to remove them the houses have to be in many cases, totally wrecked. They aimed apparently at the complete industrial ruin of Alsace. I could write a much longer letter of very interesting things which I have seen all of which show the selfishness, despicability and real hellishness of Boche "Kultur."

Ben Hurd has resigned from the Western Electric Company and has accepted a position with the Susquehanna Silk Mills, as vice-president and general manager. His office will be at 149 Madison Avenue, N. Y. He was on Governor Edge's staff, before the latter became United States Senator, and has been appointed aide on Governor Runyon's staff.

Hurd was Inspector General of the State of New Jersey at Camp Runyon, Sea Girt, N. J., and went into camp on a tour of duty on July 5. He also has been elected president of the Yonutakah Country Club of Nutley, N. J. He says they have one of the finest eighteen-hole golf courses in the metropolitan district.

Late in June he motored from New Jersey to Nonquit, Mass., and in passing through Saybrook, stopped at "Ye Olde Saybrook Inn" long enough to have a "smile" with "classmate" Chapman. "Chappie" was jovial as usual and in fine form and expects to take in the twenty-fifth anniversary in 1920.

L. P. Dickinson reports that he has severed his connection with the Rhode Island State College, Kingston, R. I., and has accepted the professorship of Electrical

Engineering in Robert College, Constantinople, Turkey. He considers the position as one of great promise, from every point of view, and although it is hard to leave his friends in this country, yet he is looking forward to his new work with the keenest anticipation.

He sailed on August 19, on the steamship "Patria" of the Fabre Line, from New York.

Apparently the biggest thing that George Merryweather did during the war was to get his picture in the "American Machinist" of the issue dated December 12, 1918, since he sent the secretary an excerpt showing said picture. Incidentally, it is only fair to state that the picture was connected with an article praising the work of the Machine Tool Section of the War Industries Board, of which section Merryweather was chief. The following shows what they think of his work.

> The wide acquaintance of the chief of this section with the makers of machines, together with his broad, practical knowledge of the industry, make possible many readjustments which obtained increased delivery and maintained harmony in the industry. The red tape of some Government bureaus was conspicuous by its absence. All dealings were direct and to the point, and whether the results were always satisfactory or not, there was never any suspicion of "passing the buck," so common in many cases.

'96 men may not have noticed that Brigadier General Dwight E. Aultman received the Croix de Guerre with Palms. We always think of Aultman more or less as a '96 man although strictly speaking, he is affiliated with '95. There are certainly a lot of '96 men who will remember him.

Winthrop Coolidge blew into the secretary's office on September 30, it being his first visit in twenty-three years. He gave the secretary one guess as to his identity, and the secretary won the guess. His purpose was to place his son, Winthrop K. Coolidge, in Technology with the expectation that he will take the course in Chemical Engineering. He has another son fifteen years of age and two daughters. He has been located in Chicago continually since graduation. His business, which was formerly that of an independent copper smelter, has gradually changed over so that now he is mainly engaged in chemical manufacturing.

The following changes of address have been received: Henry H. K. Sheridan, 61 West 10th Street, New York City.—Lewis H. Tappan, 103 Washington Street, Wellesley Hills, Mass.—George Merryweather, 2620 Overlook Road, Cleveland, Ohio.—Frederick H. Walker, care of National Textile Co., Inc., 1201 Chestnut Street, Philadelphia, Pa.,—Charles E. Lawrence, 376 Lafayette Street, New York City.—Jacob Strader, Jr., Union Carbide Co., Niagara Falls, N. Y.

Mail has been returned from the following. Any clues which any classmate can give as to the whereabouts of any one of these fellows will be most gratefully received.

William J. Batchelder, 408 Story Building, Los Angeles, Cal.—Percy K. Crocker, 66 West 11th Street, New York, N. Y.—Floyd Frazier, 522 South State Street, Chicago, Ill.—Edward B. Gordon, Jr., 28th Place and Shields Avenue, Armour Station, Chicago, Ill.—Charles H. Hall, 98 Hicks Street, Brooklyn, N. Y.—Reginald Norris, 511 Shreve Building, San Fancisco, Cal.—Harrison S. Taft, 704A Central Building, Seattle, Wash.

Myron E. Pierce is busy in his defence of the Boston Common which is now undergoing one of the periodical attempts to take strips for adjacent streets. While every Bostonian agrees that the streets need to be widened, there is a very strong sentimental feeling against giving up an inch of the Common, and Pierce is representing the opponents in the press and before the commissioners.

Harry Baldwin has sent the secretary a copy of the "General Electric Review" containing an article by him on the development of the Mobile Searchlight Power Units for the United States army. The General Electric Company did some wonderful work during the war along the line of reducing size and weight of these units without reducing their strength and capacity. In a general way it may be said that a Cadillac chassis was somewhat modified as to become the power plant for the search light and that the work was hustled to such an extent that these units were available for our men in Europe and also underwent thorough tests in the United States to show their adaptability in the roughest of conditions.

Fill out and send in YOUR blank for the Technology War Record Book.

1897

JOHN ARTHUR COLLINS, JR., Secretary, 67 Thorndyke Street, Lawrence, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Proctor L. Dougherty, VI, who for somewhat over a year has been associated with the shipbuilding program of the Emergency Fleet Corporation of the United States Shipping Board, has severed his connection with the Board and has returned to the Otis Elevator Company. He will be manager of the Washington office, and will be located in the Metropolitan Bank Building, Washington, D. C.

A. C. Lamb, X, is with the Russ Gelatin Co. at Westfield, Mass.

Walter E. Spear adds another chapter to the serial story of his army experience by informing the secretary that he was discharged from the service on August 5. In July, previous to his discharge, he was ordered to Washington where he put in a week at the office of the Construction Division. The weather must have been some hot for Walter for he adds that in his opinion any officer who spent two years of the war in Washington is entitled to a Distinguished Service Cross.

Fill out and send in YOUR blank for the Technology War Record Book.

1898

A. A. BLANCHARD, Secretary, M. I. T., Cambridge, Mass.

Every Man's Job — Work for the Technology Educational Fund.

The twenty-first reunion of the class has taken place and it was a glorious time for those who could attend. When we consider the time of year and further the fact that the notices were delayed three weeks in the printing office while the secretary was out of town and supposing that the notices were already in the mail, it is remarkable that twelve men, and wives and children to bring the total to twenty-three did attend.

The reunion took place at Lake Placid in the Adirondacks and was held jointly with '99, who turned out about the same attendance.

Monday evening '98 men met and sent challenge to '99 to meet in bridge, tennis, golf, baseball, tug of war, two-man war canoe, pool, billiards. Of course '98 was victor at all the sports, but the scores reported are:

Bridge: Delano-Wing, '98 defeated Mork-Burgess, '99, by 2525 points in 9 rubbers.

Tennis: Delano and Wing, '98, defeated Priest and Eaton, '99, 7-5; 6-3.

Golf: Kellow, '98, 120; Eaton, '99, 119; Priest, '99, 148; Corse, '99, 135.

Besides the sports, auto trips, mountain climbs, boating on lakes, and sociable evenings were enjoyed.

Resolutions were passed by the '98 men present to the following effect:

1. That a committee be appointed at the first '98 dinner this winter to take charge of the twenty-fifth class reunion in 1923 to be held at some point adjacent to Boston or New York.
2. The time of the reunion should be late in May or early in June.
3. The ladies should be invited.
4. The Class of '99 should be invited.

Those present were: Barker, Blackmer, Wing, Riley, Nickerson, Kellogg, Murless, Delano, Scott, Humphrey, Weimer, Allyn.

The above information is furnished by Barker. The last day of the reunion is chronicled by Wing as follows, it being noted that the day is the wedding anniversary of the Delanos.

There were no more arrivals on Saturday and we left Sunday noon, so believe you have the full list.

Saturday morning some of the party went for a ride. I don't know just where, as I was arranging for Delano's celebration. Saturday afternoon a party took the boat trip around Lake Placid, I believe. At supper Saturday night we had both '98 and '99 classes at one big table in our ell dining-room, for a last get-together and incidentally to pull off the Delano stunt. Mrs. Beal, who attended, had arranged a regular dinner for us, with chicken a la Maryland as the chief edible. After the dinner Bob Allyn presented to Mr. and Mrs. Delano the presents we had gathered, each with a happy little speech. These (i.e. the presents) included all the foolish things that we could think of, such as a cane and liniment for Delano's crippled members, Tiz for (his) sore feet, a real box of candy for Mrs. Delano, a whip for her to keep Delano in submission, a Kewpie doll, also a white horse. A five pound box of sugar gave Bob a chance to get off some old stuff like "sweets to the sweet," etc. Both Delano and his wife made very apt remarks in response to demands for a speech.

After the concert that night in the auditorium at Forest, Mrs. Allyn, who has a wonderful voice, gave us an impromptu songfest, that was delightful and Mrs. Kellogg recited several selections which were very interesting.

A telegram was received informing us of the death of Charles Edward Lord.

George Rupert Davison, '98, has been doing valuable work in the interests of the government at the Edison Electric Illuminating Co. of Boston. As the superintendent of the Technical Division, he has been engaged in minimizing the coal consumption at the large power stations of this company.

After graduating from the Institute in Electrical Engineering, Mr. Davison entered the employ of the Stanley Electric Co. of Pittsfield, which has since consolidated with the General Electric Co. He left his position as superintendent of the Arc Lamp Division to enter the Electrical Engineering Department of the Edison Co., and was transferred from this division to the Technical Division of which he became the head in 1917.

He determines the factors that enter into the losses in the conversion of coal energy into electrical energy, and follows these so that they are kept down to the smallest possible value. He determines the load curves for the stations, and decides when the installation of new turbines becomes necessary.

OBITUARY—CHARLES EDWARD LORD '98

Charles Edward Lord '98, widely known and beloved by Tech men throughout the country, was suddenly taken from us on September 25, and his passing is a double loss in times such as these when men of his fine type and character are so greatly needed. For the past seven years he had been in charge of the patent department of the International Harvester Company, of Chicago, and he met his death by accident in the course of his duties. The following account is taken from the October issue of "The Harvester World."

The Harvester household was shocked and grieved on Thursday, September 25, by news of the sudden death of Charles E. Lord, general patent attorney and manager of the patent department.

Late on Wednesday, Mr. Lord was motored to the Deering works by Walter F. Piper, an inventor whose process was under experiment there. They arrived after closing time and were joined by Assistant Superintendent J. E. Johnson, who stood on the running board as they drove through the yard to the foundry. Seeing a switch engine backing down to cross their road, Mr. Piper attempted to stop his car, but it slid forward with locked brakes until the front wheels were over the inner rail.

Mr. Johnson called a loud warning to the engine crew and jumped to safety. Mr. Piper stuck to his steering wheel. Mr. Lord tried to get out of the car. The impact threw him into the narrowing angle between engine and automobile, and when the car fell away he was dragged a short distance farther, his clothing having caught on the locomotive.

Mr. Lord was taken to a near-by hospital, where he died early the next morning after a night of intense suffering through which he was acutely conscious of his condition, yet courageous and hopeful to the last.

After a requiem mass at Mount Carmel church on the north side, the body was taken to Somerville, Massachusetts, for interment from the home of Mr. Lord's mother.

He is survived by his wife, Mary G. (nee Carroll), whom he married in Baltimore, Md., in 1902, three children, Charles, Katherine and James, of Chicago, and his mother, three sisters and one brother in Somerville.

Charles Edward Lord was born in Somerville, Mass., October 31, 1875, where he received his early education. He graduated from the Institute with the class of '98, in Course VI, with the degree of S. B. and then spent a year with the American Telephone and Telegraph Company, in the inspection department, at Philadelphia. He did not remain there, however, and after a short term of two months as an instructor at Massachusetts Institute of Technology, he entered the United States Patent Office as examiner, holding this position until 1902 and meanwhile studying patent law at Georgetown University Law School. In 1902 Mr. Lord became patent attorney for the General Electric Company and remained with that organization until 1904, when he resigned to become manager of the patent department of the Bullock Electric Manufacturing Company and the Allis Chalmers Manufacturing Company. He served with these organizations until 1912 and meanwhile, from 1904 to 1906, he also served as president of the Bullock Company. During this period he spent four years at Cincinnati and four at Milwaukee. In 1912 he joined the International Harvester Company and remained with this concern until his death, having charge of all patent and trade-mark business of the company, with headquarters at Chicago.

For many years Mr. Lord prepared and edited engineering text-books for the American Correspondence Schools, including "Modern Engineering Practice," in ten volumes, and "Cyclopedia of Engineering," in four volumes, all published in Chicago. He was admitted to the bar in Ohio, Wisconsin and Illinois and to practice in the federal courts, including the Supreme Court of the United States.

CHARLES EDWARD LORD, '98

Mr. Lord also had abilities as an inventor, having nearly forty United States patents to his credit.

At the time of his death he held membership in many of the leading engineering societies of the country. He was a Fellow of the American Institute of Electrical Engineers, member of the American Society of Mechanical Engineers, American Electrochemical Society, Society of Automotive Engineers, Patent Law Associations of Chicago and Washington, and the American Bar Association. Mr. Lord was also a member of the Chicago Engineers Club and the University Club of Washington, D. C. He was a lecturer on patent law at Marquette University and during the days of the war he served as a member of the War Committee of Technical Societies of Chicago. For two years, and until recently, he was chairman of the Patent Committee of the National Implement and Vehicle Association. In addition to these activities he found time to act as chairman of the Chicago section of the American Society of Mechanical Engineers in 1918 and up to the time of his death he had served on the Aims and Organization Committee of that organization, taking a keen interest in the movement for strong local engineering societies in the large cities of the country and aiding particularly in the pioneer effort in this direction undertaken in Chicago by the Western Society of Engineers.

The high esteem and respect in which he was held by his business and professional associates are splendidly expressed in the following appreciation by Harold F. McCormick which appeared in " The Harvester World " for October.

AN APPRECIATION, BY HAROLD F. MCCORMICK

Our regret over the passing of Mr. Lord is bound to be shared even by those in the Harvester organization, who knew him only through the results of his labors.

He was unique in his qualifications, a rare combination of precisely the specialized technical training, experience, and ability required for headship of the patent department of an industry like ours. I doubt if there are many men in the country who are, as he was, at once mechanical engineer, sound lawyer, and patent expert.

Mr. Lord had so used his time and opportunities in Harvester service as to gain a comprehensive knowledge and grasp of the farm implement industry's engineering and patent side; he knew thoroughly its " prior art " and the present mechanical problems in whose solution lies its future development.

To these qualities he added a breadth of vision, a sympathy and tactfulness that made him always the welcome adviser and helpful co-worker of the technical departments and of the many inventors who came to the company with ideas to be engineered into usefulness.

This quiet, modest, courteous gentleman who has suddenly been called from his place among us leaves a very definite impress of service and character; he leaves, too, a sense of personal loss that is deep and will be lasting.

Resolutions of sympathy and loss have been adopted by many of the organizations of which Mr. Lord was a member, among them the following by the Technology Club of Chicago, of which he was vice-president.

" The Technology Club of Chicago, its members and Technology itself have sustained an irreparable loss in the untimely death of Charles E. Lord.

An enthusiastic worker in all matters connected with Technology in Chicago, a genial companion, a loyal friend, always ready to help constructively, either an individual or a worth while movement, Charles Lord has left a place no one can fill.

Be it resolved, that the Technology Club of Chicago express its sympathy and understanding to Mrs. Lord in this loss, appreciating fully that deeply as we feel it, we know how overwhelmingly greater it is to her."

To the writer whose sad privilege it has been to prepare this tribute, Charlie Lord had been held in personal affection and esteem since our earliest days at Tech.

It seems hardly possible that a score of years has rolled by since we left the Institute and that he has lived his too brief life and gone. But what an example he left us of the good works a man who is earnest and sincere and determined can crowd into the brief span allotted him by the Almighty. After all, it is the service we give that counts, and he measured up to that test, four square.

In character and personality he possessed rare qualities. With technical ability in both engineering and the law, of exceptional order, he combined executive ability and good judgment, with the inevitable result that he soon attained a position of trust and responsibility in his profession. Always a man of pronounced opinions, it was natural that he should be strong in his likes and dislikes, but withal just and charitable. To his friends he was always genial and generous and to his profession he set a fine example of unselfish service and high ethical standards. Our great sympathy goes out to his family, and we shall long cherish his memory.—FRANK F. TOWLE, '99.

Fill out and send in YOUR blank for the Technology War Record Book.

1899

W. MALCOLM CORSE, Secretary, The Ohio Brass Co., Mansfield, Ohio

Every Man's Job — Work for the Technology Educational Fund.

I am in receipt of a notice from Mr. Henry C. Eaton of Waltham, Mass., announcing the arrival of David Church Eaton on July 23, 1919. David's weight was nine and one-half pounds.

As a matter of information for your files, I learned today that Carroll A. Bennink, M. I. T., '99, who has been in France for some time, as captain in the American Red Cross, has recently been made a major in the same service and appointed director of the Marne District, with headquarters at Chalons.

Clarence Renshaw, general engineer of the railway department of the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., has resigned his position with this company to accept one with the National Metal Moulding Co., also of Pittsburgh, Pa. Mr. Renshaw's resignation became effective on July 15. As a member of the Westinghouse staff of railway experts Mr. Renshaw has become very well known to the railway fraternity. He was graduated from the Massachusetts Institute of Technology and has been connected with the Westinghouse Company in its railway department for more than twenty years. During the period of the war he served as a railway expert with the United States Fuel Administration for four months and with the Housing Bureau for two months. While with the Fuel Administration Mr. Renshaw made a very valuable study of the skip-stop plan of operation. He has contributed largely to the technical press on matters of railway equipment and operating methods.

Everett H. Hinckley, who for several years has had charge of the chemistry department of the New Bedford Textile School, has tendered his resignation, which took effect at the close of the school term just completed. He will be succeeded by Frederick E. Busby, a graduate of the Massachusetts Institute of Technology and instructor there for a number of years as assistant in the industrial chemistry and textile coloring department. He afterward went to the Lowell Bleachery as chemist, and for many years filled a similar position with the Arnold Print Works at North Adams.

The twentieth reunion for the class of '99 was held at Lake Placid Club from September 21 to 27. The Class of '98 held their twenty-first reunion at the same time and place, making it a doubly enjoyable affair.

The following members attended the twentieth reunion of '99 Class held at Lake Placid Club, Lake Placid, New York, from September 21 to 27 inclusive:

Mr. and Mrs. R. P. Anderson, Miss Alice M. Burr, Mr. and Mrs. Philip Burgess, Mr. W. M. Corse, Mr. and Mrs. F. A. Caldwell, Mr. H. C. Eaton, Mr. and Mrs. J. B. Ferguson, Mr. James B. Ellery, Mr. and Mrs. W. Stark Newell, Mr. Harry S. Mork, Mr. George H. Priest, Mr. and Mrs. M. F. Richardson.

In spite of the fact that only an even dozen of the class attended, there can be no doubt that the twentieth reunion at Lake Placid was a complete success. Anything should be a success at Lake Placid in late September and our hats are off to our enterprising secretary who selected the location, made the arrangements, was first to come and last to go and always on the job. We shall always remember with pleasure the courtesies extended us by the club management and especially by Mrs. Beal, one of the vice-presidents of the club.

There were mountains for those who climbed, golf for those who golfed (and for those who didn't) tennis for those still sprightly, motoring and boating for all, while the Boston "Simfoni and Simpler Speling" satisfied our cravings for the higher things in life.

Happily it was a joint reunion with '98, which also had about a dozen members present and it was arranged by our thoughtful secretary to have our meals served together in one wing of the Lakeside dining-room overlooking Mirror Lake, so that it was possible for us to be all together at least three times a day.

The first arrivals were the secretary and Mr. and Mrs. P. A. Caldwell, closely followed by Mr. and Mrs. J. B. Ferguson on Sunday, the 21st. The following day was spent by them while waiting other arrivals, in climbing Cobble Mountain, from the summit of which is a magnificent view of the entire region. A later climb of this same mountain was made by several members of '98 and '99 under the guidance of Mr. Longstreth, a noted writer and authority on the Adirondacks.

The Caldwells, Fergusons, Corse, Eaton and Priest also industriously climbed Mt. Whitney, feeling amply rewarded by the panoramic view of the lakes below.

By Tuesday evening sufficient members had arrived to enable each class to hold a meeting for the purpose of reading letters and messages received from many members who were unable to be present, and also to try to plan out the rest of the week. '98 joined us later with a familiar class yell and a challenge presented by Barker, to take us on at golf, baseball, tennis or tug of war. The challenge was not promptly taken up as sufficient man power had not yet arrived to be properly classified. However, a very pleasant evening was spent, jointly, and wound up with an earnest and able presentation of the Single Tax by Ellery of '99.

During the remainder of the week motor trips were made to Wilmington Notch, Saranac Lake, Loon Lake, and a very interesting inspection was made of the Club Farms under the guidance of Mrs. Beal. '98 was well provided with large cars and generously helped out on all these trips, which were usually joint affairs.

The golf fiends proved to be Corse, Burgess and Mork, and Kellogg of '98, while Caldwell, Eaton and Priest admitted that they liked the game, and Ferguson who had never before played became seriously infected. Any one could enjoy golfing on such links as the Lake Placid Club can show. Oh Boy!

Eaton and Priest took on a couple of elderly '98 men in tennis and being the sort of sports for which '99 is justly famous, generously allowed themselves to be beaten by their elders.

M. F. Richardson, who had motored in early in the week with Mrs. Richardson, was the only man present who had a Graflex camera which he used in taking group pictures of both classes. We hope they will be successes, and that we can all secure copies.

The Newells motored in Monday night from Bath, Me. (some trip), bringing Miss Alice Burr and Riley, '98, but had to leave Thursday morning, much to our regret. With such a trip behind him and a longer one in front, Stark was a mighty good sport with his car, using it to the limit for the benefit of us carless ones; '99 being short of motive power. Caldwell, too, with his roadster never allowed it to carry less than three.

We had no kick on the weather, the showers only clearing the air and intensifying the autumn tang of the woods. The storm on the Lake while we were making the boat trip around it was surely enjoyed by every one. The magnificent September foliage, with its brilliant yellows and flaming reds interspersed with and set off by the spire-like dark green firs was something to be seen to be appreciated and simply beggars description. May our reunions always be held at Lake Placid. There surely can be no other place like it.

Fill out and send in YOUR blank for the Technology War Record Book.

1900

INGERSOLL BOWDITCH, Secretary, 111 Devonshire Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Since the last Class Letter appeared, the Secretary has received two most enjoyable surprises and he hopes that several of like nature may occur.

One afternoon Cliff Leonard called on him and this was the first time the Secretary has seen him since graduation. He has interested himself in the Beacon Oil Company and expects to take an active part in its development. This may call him to Boston more often than in the past, and it is hoped that we may all see more of him. He said that Bill Angus was still in Chicago and doing odd jobs for different people. He also reported that Frank Chase was doing a very successful business in industrial engineering.

Shortly after, Frank Chase called on the Secretary, and he has not changed a bit since he graduated. He is taking up the question of industrial engineering, as it applies to laying out plants, installing machinery and studying the questions of economical production.

N. J. Neall has resigned from the army and after a summer's vacation has re-opened his offices at 12 Pearl Street for the design and management of electrical properties. He has had a most successful summer on his farm near Norwood and is looking forward to an active winter.

Everybody has heard of the work that Gibbs did in Paris, and later Tech men will have the pleasure of learning about this work from him personally. He is going to devote some of his time in the near future in helping Tech raise its ten million dollar endowment fund and I am sure that there is a great deal of pleasure in store for the graduates in listening to his account of what Tech did in Paris. It is hoped that he will be able to continue his work of giving information about Tech after the drive is over and will be able to keep the more distant graduates in touch with the activities of Tech.

Jim Batcheller called on the Secretary last September, but unfortunately did not see him as he was out. He spent the summer in Alaska and expects to spend the winter in Oregon. He considers Alaska a very fine place to travel in and that the scenery is wonderful. It may become one of our famous summer resorts before long.

George Russell has made a success as head of the Junior Plattsburg Training Camp at Long Point, Lake Champlain, and has now returned to his work at Tech. We hope to hear of George's experiences sometime this winter.

Mrs. Henry E. Twombly, of Pleasant Street, Newton Center, announces the engagement of her daughter Lena Miller to Arthur Clark Milcher, who is the purchasing agent for Tech.

The marriage was announced of Clara Stetson Sargent and Captain Francis Henry McCrudden, Medical Corps, U. S. A., June 23. McCrudden has been connected with the Robert P. Brigham Hospital and has charge of the laboratories. He is also Professor of Applied Therapeutics at Tufts Medical School.

Frank E. Dodge, who was connected with the class at one time, died last spring, also William Baldwin Hough of Chicago. The secretary has not been able to obtain any details concerning their last illnesses.

Percy Ziegler is a corporal in the Newton constabulary and was on duty in the City of Boston during the policemen's strike. This constabulary voted to join the Massachusetts State Guard for one year on condition that they would not be called out unless for an emergency. The emergency came and they were on duty at the Back Bay police station and did excellent work. When the situation became more settled and it was not necessary to have so many men on duty, the Newton constabulary was among the first to be sent home. It has been a great satisfaction to the people of Boston to know that there are so many men willing to give their time for protection of the city and nothing has done more to weld together the different organizations than the policemen's strike has done.

Commander Clinton D. Thurber has been transferred to Naval Station, Pearl Harbor, Honolulu.

The committee who has charge of getting out the record of the services of Tech graduates in the great war has received very few replies to the circular which it sent out. It is the desire of the committee, and those who are interested in this record, to have as full an account as possible of what each man did and it seems only fair to them that the request should be complied with and that all replies be turned in immediately.

By the time this appears in print, the great drive for a larger endowment fund will be at its height. It is hoped that every 1900 man that can, will give part of his time as well as his money in bringing this drive to a successful conclusion.

Tech is in a much more serious position than some of the other colleges because there is a great demand for its professors and instructors for commercial positions, and the salaries which these men can command are a great deal larger than Tech can afford to pay them. It is only through self-sacrifice and interest in their educational work that the professors and instructors can remain at Tech on their present salaries. It is hoped, therefore, that this fund will be quickly raised in order that the salaries may be put on a plane commensurate somewhere near the value of the services given. It is the hope of Tech that every man will do the best he can to promote the interest of Tech.

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1901

Robert L. Williams, Secretary, 107 Waban Hill Road North, Chestnut Hill, Mass.

Every Man's Job — Work for the Technology Educational Fund.

To the list of 1901 men in the army and navy published in the last issue of the Review should be added Frank D. Rash who was a major in the Inspector-General's Department according to a letter which I have recently received from him. He was discharged the first of the year and is now back in Earlington, Ky.

After sixteen years' service in the examining corps of the United States Patent Office, John Boyle, Jr., has resigned his position as first examiner in the interference division and has opened an office for the practice of patent law at 201 Ouray Building, 8th and G Streets, N. W., Washington, D. C.

The following is taken from the "Electric Railway Journal":

> Frank B. Walker, in charge of tracks and buildings, was graduated from the University of Minnesota in 1897 as a civil engineer. He then did special work with the class of 1901 at the Massachusetts Institute of Technology. He has been in the engineering departments of the Minneapolis & St. Louis and the Minneapolis, St. Paul & Sault Ste. Marie railroads on construction; chemist and engineer for the Cleveland Cliffs Iron Company, Gladstone, Mich., and for about fifteen years was assistant engineer and resident engineer for the Great Northern Railroad. He had charge of construction of double-track railroad tunnel under the city of Seattle, and was in charge of design and construction of many of the larger docks and railroad terminals on the Great Northern Railroad. Mr. Walker entered the employ of the Bay State Street Railway in the roadway department in 1914, and has been with the system continuously until the present time, with the exception of nine months, when he was with Fay, Spofford & Thorndike, consulting engineers, Boston Army Supply Base. He became superintendent of way and structures of the Bay State Street Railway in April, 1919.

The following is taken from "Iron Age":

> Horace S. Baker, late colonel of the 111th Engineers, U. S. A., recently returned from active service in France and is now associated with Frank D. Chase, Inc., Chicago, in the capacity of engineer in charge of work for the General Motors Corporation at Janesville, Wis. He was graduated from Northwestern University and later from the Massachusetts Institute of Technology. He was engaged for several years in railroad work and from 1906 to 1917 held various positions as engineer with the City of Chicago, having been assistant city engineer for the last six years of that period. In 1917 he went into the army as captain of engineers. Then he had charge of Camp Bofie, Fort Worth, Texas, as constructing quartermaster. When this was finished, he was made lieutenant-colonel and was assigned to the 111th Engineers. He was made a colonel in September, 1918, and saw service in St. Mihiel and the Argonne.

Donald A. Kohr is assistant general manager of the Lowe Brothers Co. of Dayton, Ohio.

Robert M. Derby is connected with the foreign department of Niles, Bement, Pond Co. in New York City. His home is in Cedarhurst, Long Island.

Matthew C. Brush's name frequently appears in the Philadelphia papers in connection with his work at Hog Island where he is president of the American International Ship Building Corporation.

Ralph Whitman is aide on staff of military governor of Santo Domingo. He writes:

> Came here in April, 1917, leaving Hampton Roads a few days before the declaration of war. Military government by the United States was proclaimed in the Dominican Republic on November 29, 1916, following a military occupation by United States marines. It was necessary to restore order out of political chaos and to make the country safe. The president of the republic and his cabinet

vacated their offices rather than co-operate with the military governor, who was therefore compelled to utilize the services of his staff in the cabinet positions in order to keep the country running. There was no congress in session at the time and it has not been possible to hold a lawful election since, so the functions of the president and the congress have been vested in and exercised by the military governor, Rear Admiral Henry S. Knapp, U. S. Navy, assisted by his staff in the manner described. I was ordered down to augment the said staff and assist in such ways as might develop. My activities have been mainly in a consulting capacity in connection with the public works of the country, and I have also been concerned somewhat in the department dealing with patents, mining and industrial concessions, as well as the Department of Agriculture and Immigration. Am member of a board on prison reforms at present. Had an interesting trip through the central and northern parts of the island as the representative of the military governor, and subsequently wrote a somewhat lengthy report on conditions observed, which, fortunately, few people have to read. The admiral was kind enough to call it good and had a copy sent to Washington to file with my record.

The following changes in addresses have been received:

A. W. Higgins, 621 Summit Avenue, Milwaukee, Wis.—Capt. Stanley C. Sears, 32 Haxon Place, Salt Lake City, Utah.—R. H. Stearns, Hotel Puritan, Boston, Mass.— Edward Seaver, Jr., 31 Cleveland Road, Needham, Mass.—Howard T. Chandler, Hinckley Road, Milton, Mass.

Elbert G. Allen has been appointed advisory engineer for Stone & Webster. Since his graduation from the Massachusetts Institute of Technology in 1901 Mr. Allen has been in the continuous employ of the company, having been engaged for the most part on work at Boston and in the Puget Sound district. In 1918 he was made assistant engineering manager.

Fill out and send in YOUR blank for the Technology War Record Book.

1902

Frederick H. Hunter, Secretary, Box 11, West Roxbury, Mass.

Burton G. Philbrick, Assistant Secretary, 585 Boylston Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Robinson has severed his connection with the Federal Board for Vocational Education at Washington and on October 15 became superintendent of the Inspection and Service Department of the General Fire Extinguisher Company of Providence. Robbie will reside at his old home, 203 Washington Street, Canton, Mass.—Grant Taylor came to Boston on October 1 to organize an estimating department for the local office of the Turner Construction Company, 178 Tremont Street. Taylor has been in the same department of the company for some years past at their main office in New York.—Manley is connected with Lockwood Greene & Co., the well known textile mill engineers, as supervisor of construction. He is looking out for several mills that the firm has underway in the East and is still residing at Elmhurst, Long Island.—Miss Weld left the Newport News Shipbuilding Company in February, 1917, on account of a nervous breakdown, and has taken up ranching in the Antelope Valley, some fifty miles north of Los Angeles, her address being Del Sur, California. She writes that she is managing some four hundred acres and raising alfalfa, grain and hogs. In April, 1919, at the request of Emergency Fleet Corporation she went to San Francisco and helped in establishing a Western office and for some time lent a hand in expediting production of ships on the Coast, staying on the job until a capable engineer could be found to take over the technical end of the work permanently. Women have done some important work in this war, but we wonder if any other woman was called on for technical work in connection with shipbuilding as was our industrious, but most modest co-ed member. — Louis S. Cates reports that Charlie Smith is superintendent of mines at Ray. — Comins has been promoted to manager of the Saint Louis Smelting and Refining Company plant at St. Francois, Mo. This is a higher position with the same company that Comins left to go into the service at the outbreak of the war.—Bartlett was married on October 4 to Miss Anne M. Pierce of North Andover, Mass. " Dimmy " has resigned from his former position with Walker & Gillette, architects of New York, and expects to take up architectural work in Los Angeles, whither he and his bride set out by auto after the wedding.—Thayer Gates has opened offices in the Grosvenor Building, Providence, R. I., hanging out his shingle as " Consulting Engineer and Textile Specialist."—Seabury is out of the service and has also located in Providence as " George T. Seabury Incorporated, General Contractors."—Larrabee is general manager of the Eastern Connecticut Power Company of Norwich, Conn. He has charge of a 22,000 kilowatt plant connecting with the lines of the New England Power Company and serving an extensive territory. His domain might be described as bounded on the north by the Putnam Light and Power Company, of which Thurston is manager.—Jack Fruit is with the Canadian Electric Products Company, Shawinigan Falls, Quebec.—Dutton is located at 6840 Merrill Avenue, Chicago.

It is a pleasure to chronicle the arrival on July 10 of Miss Sarah Niles Pendergast. Somehow " Pendy " didn't seem depressed when he last talked with us!

A change of interest to local business and social circles was announced today. A. S. More, Course I, will leave Winona about October 1 for Detroit, Mich., to become associated in the management of a large concern manufacturing automobile parts.

Mr. and Mrs. More came to Winona from Springfield, Ohio, in June, 1913. Mr. More was first associated with the Union Fibre Company as vice-president and general manager, and since May, 1917, has been with the Bay State Milling Company as sales manager and assistant secretary from which position he is now resigning.

During his six years residence here, Mr. More has taken great interest in the civic and industrial development of Winona acting as president, director and chairman of the Industrial Committee of the Association of Commerce. He has been a director of the Merchants Bank of Winona since January, 1918, and is also a director of the American Corn Millers Federation.

During the war Mr. More took a leading part in the various activities, serving as city chairman of the United War Work campaign, and as ward captain of Red Cross drives. He was a four-minute man, a member of the Advisory Committee, County Draft Board and local representative of the United States Public Service Reserve.

Announcement has been made of the appointment of Mr. L. S. Cates, Course III, general manager of the Ray Consolidated Copper Company, to the position of assistant general manager of the Utah Copper Company. Mr. Cates needs no introduction to Utah Copper employees and officials, as he was mine manager of the Boston Consolidated Mining Company for several years prior to the consolidation of that company with the Utah Copper in February, 1910. Shortly after the consolidation, Mr. Cates went to the Ray Consolidated property in Arizona to take the position of general manager of that property, which title he will retain for the present. As a tribute to Mr. Cates' ability and popularity, the following editorial, from a recent edition of the Tucson " Citizen " will be interesting:

> When Louis S. Cates removes on the first of August to Salt Lake City, Arizona will lose one of her biggest men, and while Mr. Cates' admirers in this state are delighted to see him become assistant general manager of the greatest copper mine in the world, at the same time they are sorry to lose such a good booster and progressive citizen.
>
> In Arizona, Louis Cates has been more than a mine manager. He has been active in nearly every public enterprise, and while he has modestly kept in the background, he has been responsible for the success of many big things. It was he who made Pinal the banner county in the Liberty Bond drives; he was a strong factor in the first Council of Defense; as a member of the District Draft Board he saw that the law was administered without fear or favor; he has been one of the most liberal patrons of racing at the State Fair; he built up the Ray schools to a high standard; he has been a patron of baseball and other clean sports. In fact, his public works are too many to list in this short space.

Fill out and send in YOUR blank for the Technology War Record Book.

1903

Myron H. Clark, Secretary, 1790 Broadway, New York, N. Y.

Ralph H. Nutter, Assistant Secretary, Box 274, Lynn, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Colonel Horace S. Baker, 111th Engineers, U. S. A., who recently returned from France, has received his discharge from the service and is now in charge of the work for the General Motors Corporation, Janesville, Wis.

The following is a clipping from the " New York Sun ":

> Announcement has been made by Justice and Mrs. George M. Hanson of Calais, Me., of the engagement of their daughter, Miss Emily Lowell Hanson, to Capt. George Barrows Obear, U. S. A., head of the Department of Physics and Engineering at the Medical Research Laboratory at Hazelhurst Field, Mineola. Captain Obear was graduated from the Massachusetts Institute of Technology, and has been professor of physics at Colby College and in the Case School of Applied Sciences in Cleveland, Ohio. The wedding will take place August 28, 1919.

Changes of Address

Colonel Horace S. Baker, 6657 Greenview Avenue, Chicago, Ill.—Mrs. William A. Hutcheson, 45 East 82d Street, New York, N. Y.—Herbert E. Raymond, 1 Prospect Street, St. Albans, Vt.—Ralph B. Yerxa, 165 Division Street, New Haven, Conn.

Fill out and send in YOUR blank for the Technology War Record Book.

1904

Henry W. Stevens, Secretary, 12 Garrison Street, Chestnut Hill, Mass.

Amasa M. Holcombe, Assistant Secretary, 610 Boatmen's Bank Building,
St. Louis, Mo.

Every Man's Job — Work for the Technology Educational Fund.

Probably the most important note to be brought to the attention of the class at this time is the raising of the Endowment Fund of $4,000,000 to match the latest offer of our benefactor, " Mr. Smith."

As these words are being written, the machinery of the organization, to conduct the drive, is being fitted together, and oiled up so that it shall function properly in order to gain maximum results. Before this issue of the REVIEW is in the hands of its readers, it is more than probable that all members of the alumni will have received literature on the subject, if not personal calls by representatives of various committees.

In case you, Mr. '04 Man, have not been treated to the pleasures mentioned above, do not feel slighted, for you have not been overlooked. Your messages may have been delayed in transmission. You can anticipate their receipt by acting upon the notice you receive by reading this article.

If you have received previous communications, but have not acted, let this serve as a jog to your memory, and " sign on the dotted line " today. If you have already acted and your conscience is at rest concerning your own action, just go out into the highways and byways and get some one else to help out. Remember that this is a " give and get " campaign and every dollar counts, and the earlier it is counted, the better.

PERSONALS

A. M. Holcombe has been released from the United States army and has associated himself with the Washington office of Emery, Booth, Janney & Varney, the largest aggregation of patent lawyers in the business, located at 1012-18 Washington Loan and Trust Building, Washington, D. C. In a letter to the secretary he makes the following offer to the class:

> If you or any of the boys get into jail on account of infringing a patent, I will be glad to assist in spending the funds allotted for getting you out. Also, if you should make any invaluable invention in connection with the work of a corporation with plenty of funds, I will be glad to place my expert services at your disposal for a proper consideration. In other words, I have got to go back to working for a living like the rest of you.
>
> I hope you will look me up any time you are in Washington, and as I have just bought a house at 3305 18th Street, with one or two extra bedrooms, perhaps that will be an inducement to your taking the trouble to at least call me on the 'phone.

" Gus " Munster is a member of the Regional Purchasing Committee, Eastern Region, United States Railroad Administration, with headquarters at the Grand Central Terminal, New York City. The above information was gleaned from the letterhead on which Gus turned in the following:

> I always did have a great desire to be a reporter and with the hope of being employed by the publication committee of the class of '04, I wish to report the meeting on Broadway after dark last evening of Mr. O. G. Thurlow.
>
> Thurlow, who has put on forty pounds and apparently benefited by the high cost of living, surprised me last night by telling me my name. He is chief engineer of the Alabama Power Company and vice-president of the Dixie Construction Company, with offices at Birmingham, Ala. He married a New England girl about four years ago and was on his way back from New England at the time of meeting.
>
> In order to prove that his name was Thurlow, it was necessary to get a profile view of his face, as everything else is so changed that identification would be impossible.

Gus also turned in the information that the September and October issues of the " Woman's Home Companion " contained two articles entitled " My Flying Husband " by Adelaide Ovington. These articles furnish many sidelights on " our Flying Classmate " which are doubly interesting to all of us who knew him so well.

Gus is some reporter when he starts.

Selskar Gunn " '04 " (not " ' 05 " as that misguided class constantly states), was in Boston for a few minutes one day last summer and called the secretary on the 'phone. He has severed his connection with the Institute and is to devote his entire time to his work on the stamping out of tuberculosis. He expected to return to France in September, where we presume he is now. Gunn was highly honored by the French government for his work along these lines during the war, being given the cross of the Legion of Honor.

Currier Lang, with his family, spent the summer at Allerton, Mass. He has severed his connection with the Detroit Gear and Machine Works and is desirous of affiliating himself in the East as he says it feels more like home to him. He has located for the coming winter at Dedham, Mass.

Guy Palmer was on from Chicago early in the summer, and, according to Mert Emerson, was looking for a chance to purchase a farm, " somewhere in New England." Whether he succeeded in his quest has not been revealed to the secretary.

A letter from Selby Hoar enclosed a newspaper cut, from the New York " Sun," entitled " Flying Fishermen and Their Catch." One of the fishermen is, of course, none other than " Volts " Ovington. According to the explanation with the cut, the fish shown were caught from a seaplane while skimming the tops of the waves at seventy-seven miles an hour. It sounds like some stunt, but we feel sure that if anybody could do it, that man would be " Volts."

" Tommy " Rockwood, as a member of the First Motor Corps, Massachusetts State Guard, while directing traffic at Commonwealth Avenue and Beacon Street, was really run down by the secretary. " Tommy " had a 45 calibre colt strapped to his hip, which he started to unlimber, but the secretary escaped by steering a zig-zag course.

Maurice Thompkins has also been engaged in protecting the City of Boston. He is a captain in the 12th Regiment Massachusetts State Guard and was stationed at Police Station 9, Dudley Street, Roxbury.

In closing the class notes for this issue, the secretary wishes to call to the attention of the members of the class who receive the REVIEW, the fact that very few '04 men have returned their reply blanks to the editor of the Technology War Record now being compiled. It is of great importance that every alumnus should return the blank as in no other way can the necessary information be gathered from which a full and complete record of Technology's participation in the war can be made up. It is hoped to have the books ready for distribution by next June, and this can only be accomplished if the information is promptly forthcoming. So if any reader remembers that he has not yet replied, he will be helping out, by doing so by the next mail. I thank you.

Fill out and send in YOUR blank for the Technology War Record Book.

1905

GROSVENOR D'W. MARCY, Secretary, 246 Summer Street, Boston, Mass.

CHARLES W. HAWKES, Assistant Secretary, 25 Saxon Road, Newton Highlands, Mass.

Every Man's Job — Work for the Technology Educational Fund.

If the class news for '05 in this issue of the REVIEW appears scanty it can be charged to the fact that the secretary and assistant secretary have been pounding the pavements of Boston for the last three weeks on police strike duty. As members of the Newton constabulary, they were involved in the situation when the governor requested this especially well drilled and equipped organization to volunteer for the emergency as a special unit of the State Guard, which it did practically one hundred percent. We were quartered in Mechanics Building, and except for the slightly irregular hours and the large amount of walking necessary, we found the experience an interesting one. Of course it interfered slightly with business, but what probably influenced Governor Coolidge to relieve this particular unit was the fact that there would be no class news for the REVIEW unless he let us out, which he did just in time to get this in before going to press.

Paul J. Ralph and Miss Margaret Buyers Kennedy were married in Trenton, N. J., on September 27. Mr. Ralph is employed as a marine engineer with the Ship Construction Department of the Emergency Fleet Corporation, and they will make their home at Newport, Spruce Street, Philadelphia.

Mr. and Mrs. Thomas Shaw report the arrival of Richard Brook Shaw, weight eight and one-half pounds, on July 31, 1919.

Professor Selskar Gunn has resigned from the faculty of the Institute. Gunn made a visit at this office, but the secretary was unfortunately out when he made his call so he missed the opportunity of getting a personal account of Gunn's work in connection with the fight against tuberculosis in France. His work has received high recognition, and it is supposed that his resignation from the Institute is in order to enable him to carry it on to a conclusion.

More detailed information about Lieut.-Col. Louis Robbe's work in France and Germany was received from Mrs. Robbe during the summer, and the following is of interest:

> Colonel Robbe, after serving as chief gas officer of the 3d Army Corps up to the signing of the armistice, went into Germany with the above corps and was located at Neuwied-on-the-Rhine, until he was made chief gas officer of the 1st Army. After serving in such capacity for a length of time, he was made chief gas officer of 2d Army and held such position until the 2d Army stopped functioning and passed into the Service of Supply.
>
> Colonel Robbe was then selected to go back into Germany in charge of two Chemical Warfare Service parties to direct demonstrations before the 3d Army and to lecture before the officers of the different divisions. While performing the above duties, he was made chief gas officer of 3d Army and has just been relieved of said office, and after finishing up his reports at Tours, he writes he will start for the good old United States about the 10th of July.
>
> Colonel Robbe received his commission as Lieutenant-Colonel Chemical Warfare Service many months ago.

Frederick H. Andrews sailed for Skagan, Norway, on the 9th of August, representing the Huff Electrostatic Separator Co. of Arlington, Mass., to start in operation one of the largest graphite mills in that country.

Leonard Cronkite made a trip to Europe early in the summer in order to form new connections for his several companies which deal in dyestuffs and confectionery.

The following cards from '05 men are of interest:

> Am again at work in the electrical line, for the Empire District Electric Co. at Riverton, Kan. Have been here about a year now, engaged in general electrical construction and repair work. The plant here is about 45,000 K. W. capacity, two Westinghouse, 8,000 K. W. turbine generators, one 12,000 K. W. G. E. and one Allis Chalmers, 16,000 K. W. turbine generators. The plant supplies power and light to the adjacent mining district in Oklahoma, Kansas and Missouri, also to the surrounding cities and towns, and to the electric car lines near here. I am one of the electricians here, and there are good opportunities for experiences.
>
> Best wishes to all our friends,
>
> J. A. MEGGISSON, Riverton, Kan., Cherokee Co.

What do you mean 'News'? I haven't done anything noteworthy the last year except lose money and weight due to the heavy strain of placing ordnance contracts down in Washington with the thermometer one hundred degrees on the shady side of 6th and B Streets. By applying myself assiduously to golf I am getting back the weight, but I guess the money has gone for good. I am now back with the U. U. Tel. Co. at 195 Broadway, New York, as engineer on valuation work. Saw Major Holcomb, '04, frequently in Washington, and am sorry I did not see you. I visit the Technology Club here once or twice a month, but it is pretty quiet there, and I have seen no '05 men in an age.

How is Al Prescott these days? Haven't heard from or of him since the last big reunion. What's the program for next year? Do we have a big time? If so I hope I can make it.

Best o' luck.

P. C. HILL.

The only thing Kilborn Whitman could think of in reply to a card asking for "news" was that he thought he owed the class money. All of the rest of the class are in the same situation, or will be shortly, when notices of an assessment of dues will be sent out. During the confusion of war times no assessment was made so the treasury is about dry. It is hoped that every one will pay promptly as we want a good working fund to get ready for the big reunion next year, which will be our fifteenth.

Before starting work to raise the four million dollars to match Mr. Smith's gift, Andy Fisher kindly collected a few items of class news to help the secretary out, which are as follows:

Dear GROVE: Enclosed find a clipping from the Sunday "Globe" about Billy Ball winning the golf championship.

William G. Ball showed great form in the two days' competition for the club championship at the Oakley Country Club, winning the title for the seventy-two holes medal play with three hundred ten as his score, an average of seventy-seven and one-half for each round. Ball led N. W. Dean, who finished second by fifteen shots.

Bob Lord, Estabrook, Killon and myself went up to Dover yesterday and celebrated the tenth anniversary of the Tech Club of New Hampshire. We had President Maclaurin with us, and after giving him a few drinks of Rollins' farewell punch he disclosed to us the identity of "Mr. Smith," but we promised not to tell anybody else, provided he would agree to make the information public at the annual alumni dinner next winter.

If there are any other '05 men who want to know who this gentleman is they can perhaps find out by buying some of Bob Lord's amalgam belt leather, or Fisher Chemical Co.'s dyestuffs.

Mail has been returned addressed to the last address of the following men. It is requested that any one knowing their present whereabouts will inform the secretary.

David L. Davis, Frederick M. Eaton, J. Hurley Edmund, William A. Nelson, Raymond F. Page, Percy H. Physeck, Leon K. Saney.

New addresses have been received since the last issue as follows:

Professor Chester Allen, 203 Temple Street, West Roxbury, Mass.—Carlton E. Atwood, Santo Domingo Water, L. & P. Co., Santiago, West Indies.—Lloyd T. Buell, Casilla 226, Coquimbo, Chile.—Roswell Davis, 19 Thorndike Street, Beverly, Mass.—Arthur M. Dean, 16122 Clifton Boulevard, Lakewood, Ohio.—Harry W. Donald, 185 Devonshire Street, Boston, Mass.—Warren S. Higgins, Hampden-Sidney College, Hampden-Sidney, Va.—Capt. Edgar L. Hill, Heyl & Patterson Inc. 90 West Street, New York.—Percy G. Hill, 195 Broadway, New York.—Maj. Phillip E. Hinkley, 200 Devonshire Street, Boston.—William H. Humphrey, 270 Newark Avenue, Bloomfield, N. J.—Edmund Joseph Hurley, 112 Charles River

Road, Cambridge, Mass.—H. Louis Jackson, 1213 11th Avenue North, Fargo, North Dakota.—W. Herbert Keen, 1432 Elbur Avenue, Lakewood, Cleveland, Ohio.—Alfred N. Kelling, 800 North Clark Street, Chicago, Ill.—Lieut.-Com. Henry Keith, U. S. N. R. F., Navy Yard, Boston, Mass.—Lewis J. Lyman, 15 Ashburton Place, Boston, Mass.—John A. Meggison, Galena, Kan.—Harold W. Mitchell, 822 Borland Building, Chicago, Ill.—Samuel S. Stevens, Salem, Mass.—Webster H. Taylor, 1118 South Michigan Avenue, Chicago, Ill.—Kilborn Whitman, Jr., 134 Sigourney Street, Hartford, Conn.

Maj. John C. Damon, '05, has returned to civil life and entered the organization of the West Penn Power Co. Major Damon was taken from the 114th Regiment of Engineers for special duty in the Power Section of the War Industries Board. He was born in Concord, Mass., was graduated from the Institute in 1905, and remained there the following year as assistant in the electrical engineering laboratory.

He began his professional experience in the construction department of the Chicago Telephone Co., but soon went further west for construction work on large hydroelectric developments and transmission lines. In 1909 he became connected with the Colorado division of the Telluride Power Co. as superintendent of operation, and in the following two years was responsible to a large degree for the rapid improvement of this pioneer hydroelectric development. In 1911 he entered the organization of the Trinidad Electric Transmission Railway and Gas Co., and was active in the design and construction of its steam plant at Walsenburg, Colo. A year later he entered the engineering department of the Electric Bond and Share Co. which was at that time undertaking the development of the Utah Power and Light Co. After working with his company for a time he went to Utah as assistant chief engineer.

In the fall of 1916 Mr. Damon enlisted in the Engineer Reserve Corps, and was subsequently commissioned a captain. He received training at Fort Leavenworth and was ordered to Camp Beauregard, Louisiana. In January, 1918, he was transferred to the War Industries Board. In this capacity he was assigned first to study the problems of power supply and transmission in the industrial centres of the East, then was placed in charge of the Pittsburg and Eastern Ohio District of the development and control of the power supply, and the following month was promoted to the rank of major. Major Damon is a member of the American Institute of Electrical Engineers and of other engineering societies.

Fill out and send in YOUR blank for the Technology War Record Book.

1906

C. F. Wetterer, Secretary, 147 Milk Street, Boston, Mass.

J. W. Kidder, Assistant Secretary, 50 Oliver Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

E. R. Hyde, I, called upon the assistant secretary a few weeks ago. He had just received his discharge from the service and was on his way back to Manila to take his former position with the Board of Public Works. Hyde entered the service as a reserve officer and received his commission as captain in the Artillery. He supervised the construction of coast defenses in this country and also acted as instructor at Camp Humphreys. Those who knew "Ed" will not be surprised to learn that he was delegated to teach English to some of the West Pointers who graduated early on account of the war.

Dana M. Wood, I, who has been acting as assistant to the district manager, Division of Wood Ship Construction for the New England District of the Emergency Fleet Corporation, has resumed his former position as hydraulic engineer with the Stone & Webster Corporation.

Henry A. Ginsberg, VI, announces the birth of a daughter, Irene Natalie, on August 11, 1919. Ginsberg now has two children.

F. R. Batchelder, VI, is back in the engineering department of the New England Telephone & Telegraph Co. "Batch" is one of the few '06 men to see service in France. He served with the 401st Telegraph Battalion, one of the Signal Corps units responsible for the remarkable telephone system constructed for the American Expeditionary Forces.

The following appeared in the Boston "Post" of July 1:

> Miss Eleanor Manning of Lynn, carries on an architectural business with her partner, Miss Lois L. Howe. She is president of the Business Women's Club. She graduated from Technology in 1906. She proclaims the new gospel of work for women, declaring the business field is now wide open to them.

Miss Manning has taken an active part in war welfare work in Boston, her firm being responsible for the design of the Service Recreation Center located upon Boston Common.

In an article in "Tech" of October 3 devoted to the proposed War Record Book, mention was made of the part Tech men played in the flight of the N-C boats across the Atlantic. Commander H. C. Richardson, '06, was in command of the N-C 3. This boat was forced to come down on account of the fog but Richardson brought her into the harbor at Ponta Delgada under her own power after a plucky battle with the wind and sea.

Fill out and send in YOUR blank for the Technology War Record Book.

1907

Bryant Nichols, Secretary, 2 Rowe Street, Auburndale, Mass.
Harold S. Wonson, Assistant Secretary, Care W. H. McElwain Co.,
Manchester, N. H.

Every Man's Job — Work for the Technology Educational Fund.

On June 28, 1919, a small group of fellows near Boston assembled for dinner at the Boston City Club and listened with deep interest to the stories told by Lieut.-Col. Harold S. Morison, '07, who was a member of the Committee on Supplies of the Council of National Defense; Maj. Alexander Macomber, '07, who organized and commanded the Searchlight Division engaged in anti-aircraft work; and Maj. John H. Leavell, '07, who was with the engineers in France and as all of us who know him would expect, performed many heroic deeds and won several decorations. Those present besides these three men were: E. A. Miner, Prescott R. Nichols, Charles E. Allen, E. E. Turkington, Gilbert Small, Oscar H. Starkweather, Edmund H. Squire and Bryant Nichols.

Jean Barker has resigned as professor at the Institute and is connected with the First National Corporation, an organization of the First National Bank of

Boston, at 70 Federal Street, Boston.—E. W. Bonta returned to his home in Syracuse, N. Y., late in June from his war service as Young Men's Christian Association field secretary in Russia.—Lester W. Brock has left Boston and is in the automobile business at Rockhill, S. C. (Box 397).—Raymond F. Couron, a graduate in Course I, died of influenza on January 23, 1919, after a very brief illness. Ever since graduation he had been associated with his father in the wholesale hardware business and had been very successful. He was not married.—Once again Ralph Crosby has changed his address. Now he says he has settled down and his partnership in the concern, F. A. Horner, Construction Engineer, 422 Widdicomb Building, Grand Rapids, Mich., promises a fine opportunity. Here's hoping!— John Donaldson, 73 Groveland Terrace, Minneapolis, Minn.—S. Breed Hall, who was captain, Company B, 116th Ammunition Train, 41st Division, returned to Boston in March and resumed his law practice at 101 Milk Street in that city.—Lawrence C. Hampton, 1615 North Western Avenue, Los Angeles, Cal.—C. M. Hutchins is with the export department of W. L. Douglas Shoe Co., Brockton, Mass.—John F. Johnston, Jr., Union Construction Co., Oakland, Cal.—Henry M. Lewis, 2217 Providence Avenue, Chester, Pa.—W. S. Lucey, Hammermill Paper Co., Erie, Pa. —E. A. Miner, 127 Summer Street, Malden Mass.—Raymond W. Parlier was transferred in June to New York City. His address is 64th and West End Avenue.— The very real sympathy of the class goes out to Allen Pope on account of the death of two of his four children from influenza. Although this happened last fall the secretary learned of it very recently. —Charles F. Runey, Potash Reduction Co., Hoffland, Neb.—Theodore L. Smith, Gillette Safety Razor Co., Boston, Mass. —In the last issue of the REVIEW we told of the transfer of Robert E. Thayer to London. His address is 85 Fleet Street, London, E. C. 4, England, and he is European editor of Simmons-Boardman Publishing Co., publishers of "Railway Age," "Railway Electrical Engineer," "Railway Maintenance Engineer," "Railway Mechanical Engineer," and "Railway Signal Engineer."—The secretary was surprised and delighted early in October by a call at his office by E. A. Thornton of our class who is chief engineer of Ray Consolidated Copper Co., at Ray, Arizona. Thornton was East on a vacation. He looks well and says things are going nicely with him.—During September the secretary also had a telephone chat with J. E. Tresnon, who is back in the United States after several months in England. Tresnon's address is care J. C. Damon, West Penn. Power Co., Pittsburg, Pa.—William F. Turnbull, 1834 15th N. W., Washington, D. C.—J. D. Whittemore, general manager of the West Virginia Traction & Electric Co., Wheeling, W. Va., has been appointed receiver for the company by the judge of the United States District Court.

C. H. Howell, '07, newly elected president of the Ohio Electric Light Association, is vice-president of the Ohio Service Co., Coshocton, Ohio. He was graduated from Richmond College, Richmond, Va., in June, 1905, with the degree of Bachelor of Science, and immediately thereafter became a car barn foreman with the Newport News & Old Town Street Railway Co. at Hampton, Va. In January, 1906, he entered the student course of the General Electric Co. at Lynn, Mass., and coincident with this work in 1906-1907 took post graduate work in thermodynamics and electrical engineering at Technology. In 1908 Mr. Howell entered the student course of the General Electric Co. at Schenectady, N. Y., and in 1909 entered sales work as commercial engineer in the power and mining and small motor department of the General Electric Co., Pittsburgh. He pursued this work until August, 1912, when he accepted the position of manager of the Coshocton Light & Heating Co., Coshocton, Ohio. In January, 1913, jointly with this position, he took the managership of the New Midland Power & Traction Co., Cambridge, Ohio, and in May of the same year took a similar position with the County Electric Co. at New Philadelphia and Dennison, Ohio, and the Twin City Traction Co. at Dennison, Ohio, and the Tuscarawas County Light, Heat & Power Co., New Philadelphia. Also during the year 1913 he was appointed manager of the Lafayette Light & Power Co., Strasburg, Ohio. All of these companies, including the Strasburg Electric Co., Strasburg, the Newcomerstown Light, Heat & Power Co., Newcomerstown, were later merged into a single corporation, which is now known as The Ohio Service Co.

Under Mr. Howell's directorship the company since 1914 has constructed over one hundred eleven miles of thirty-three thousand-volt transmission lines, connecting all the above towns some twenty-one miles of thirteen thousand-volt power feeders, and two new power houses. The company is now operating in twenty-six different communities scattered over four counties; two railway systems; two central district heating systems and two hydroelectric plants. Since 1914 the revenue of The Ohio Service Co. has grown more than one hundred per cent and the number of customers connected to its lines since the beginning of 1916 has increased seventy-seven percent. Mr. Howell was one of the first among those who appreciated the possibilities of selling utility stock to customers and residents in the territory served by the utility. Today he is reaping the benefit of this for his policy has been prosecuted most successfully. He is a member of the American Institute of Electrical Engineers, American Electrochemical Society, the Boards of Trade of Coshocton, Cambridge, Dennison, Uhrichsville, New Philadelphia and Dover, and is a director in the Coshocton Board of Trade, a Rotarian at Coshocton, and for a number of years has been a member of the executive committee of the Ohio Electric Light Association.

J. D. Whittemore, '07, VI, general manager of the West Virginia Traction & Electric Co., Wheeling, W. Va., formerly manager Gardner Electric Light Co., has recently been appointed receiver for the company by Judge Dayton, of the United States District Court.

Fill out and send in YOUR blank for the Technology War Record Book.

1908

RUDOLPH B. WEILER, Secretary, care The Sharples Separator Co., West Chester, Pa.
LESEUR T. COLLINS, Assistant Secretary,
Care Imbrie & Co., 13 Congress Street, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

F. K. Belcher, assistant district chief inspector Emergency Fleet Corporation, 140 N. Broad Street, Philadelphia, Pa., announces the arrival of a daughter Betty Elaine, on September 1, 1919, at 1540 N. 19th Street, Philadelphia, Pa.

The following is taken from a letter from A. H. Bradford, who is with the Shumigan Packing Co., Squaw Harbor, Unga Island, Alaska.

> Shortly after our participation in the late war, I abandoned my engineering work in this country, at least for the time, to engage in the salmon canning business. This seemed the best way for me to do my bit towards the common foe. For family reasons it was impossible for me to become aligned with the active forces at the front and hence was obliged to confine my activities to the food producing end.

The business I am now in, and about which I have had more than an academic knowledge for the past six years, is a most fascinating one and also a most profitable one. And the gap separating an engineer and commercial fisherman, especially one with a Tech polish, after all is not a very wide one. The easier bridged, perhaps if one enjoyed a considerable local reputation during the days of his youth as a Nimrod of ability. The nature of this business requires large capital and heavy expenditures. Our plant is equipped to pack four thousand cases of salmon, forty-eight pounds to the case, in ten hours, and we require sixty to seventy thousand fish daily to maintain this output.

I spend about seven months of the year in this region and five months on the Coast. Have not been East since 1910 but hope to make a trip perhaps this winter.

Horace E. Allen has been appointed general superintendent of the Saginaw Bay City Railway, Saginaw, Mich.

New Addresses

Claude O. Brown, International Paper Co., 30 Broad Street, New York City.—Harry L. Burgess, American Telephone & Telegraph Co., 195 Broadway, New York City.—George S. Coleman, 15 Marmion Street, Jamaica Plain, Mass.—J. S. McNutt, care James N. Well's Sons, 191 9th Avenue, New York City.—John Tetlow, Hyatt Roller Bearing Co., Harrison, N. J.—Raymond W. Ferris, Vernon, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Addresses are wanted of Frederick W. Lyle and Stansbury Thompson.

Fill out and send in YOUR blank for the Technology War Record Book.

1909

Charles R. Main, Secretary, 201 Devonshire Street, Boston, Mass.

George A. Haynes, Assistant Secretary, 530 Atlantic Avenue, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

The big job before us now is the raising of the $4,000,000 endowment fund. You have all received first hand information from the committee in charge and I trust you have "come across" to the best of your ability. We simply want to impress it upon you at this time that we all must work hard to put this thing across. So let's all get together and show that in percentage of contributions, if not in total amount subscribed, ought nine heads the list.

One other thing,—the Committee on War Records has sent to the class secretary a list of men from whom replies have been received. Up to October 1, only about one hundred replies had come in from our class! The success of the book depends entirely upon all of you fellows, and it is hoped that within a short time, a considerable number of additional replies will come in. The men in active service are especially urged to fill out the form and return to the committee, but those of us engaged in work at home in any way related to the war should make returns at once.

Getting back to the social activities of the class, the secretary was very much pleased to receive a long letter from Stephenson about a month ago, announcing the birth of Joseph Harvey Stephenson on July 26. "Steve" says that "the nurse maintains that the length of Joe's feet indicates that he will be a runner, although she knew nothing of his daddy's more or less successful attempts in that line."

Stephenson is editor of the "Pulp and Paper Magazine" in Montreal and hopes that if any of the class ever get to that city, they will call him up, St. Anne de Bellevue 145.

Two marriages are recorded in this issue: that of Henry R. Putman on August 2 to Miss Edith Nagel, daughter of Mr. and Mrs. Charles Nagel, at Marion, Mass. The bride's father was secretary of the Department of Commerce and Labor under Mr. Taft. The other marriage was that of Laurance D. Chapman to Miss Sylvia Clark of Winchester, N. H.

The engagement of Henry W. Dun, Jr., to Miss Katherine Hale of Winchester, Mass., has been recently announced.

George E. Washburn, son of Mr. and Mrs. Abram C. Washburn, 36 Forest Street, has accepted the assistant professorship in the modern language department at the Pennsylvania State College. He assumed his new duties this week. For the past two years he was engaged in important war work at the Bureau of Standards in Washington, and for two years prior to that was an instructor at the Massachusetts Institute of Technology.

Capt. Stuart Thompson, '09, passed away some time ago from the effects of bronchitis followed by double pneumonia. Captain Thompson, son of Dr. Elihu Thompson, was born in Lynn, Mass., August 13, 1866. He graduated with highest honors from Harvard in 1908 and in 1909 from Technology where he specialized in Industrial Chemistry and Electrochemical Engineering. He then entered the employ of the General Electric Co. in the Research Laboratory, first at Lynn and then at Schenectady, where he later entered the Consulting Engineering Department. During the early months of the war as a civilian he worked on many war problems for the General Electric Co., was later loaned by them to Research Laboratory of the Bureau of Mines and finally received his appointment as 1st lieutenant, Chemical Warfare Service, November 2, 1917. Because of his unusual ability in solution of new problems he was transferred to the Aircraft Armament Section of the Ordnance Department, working chiefly on the design and production of "Drop Bombs." In October, 1918, he was promoted to the rank of captain. He was retained in the service until March, 1919.

Fill out and send in YOUR blank for the Technology War Record Book.

1910

DUDLEY CLAPP, Secretary, Gloucester, Mass.

Every Man's Job — Work for the Technology Educational Fund.

The following bits of news culled from the military service reports are of interest:

Lieut.-Col. Charles Almy, Jr., was commissioned Captain, Sanitary Corps, December 31, 1917. He received his major's commission in the Chemical Warfare Service, July 13, 1918, and his commission as lieutenant-colonel in the same service, October 25, 1918. He was overseas part of the time and was discharged March 6, 1919. He is now in business in partnership with Lieut.-Col. Bradley Dewey, '08, in the mill supply game.

Edward S. Howe, Course VI, was discharged from the army December 26, 1918. His rank at that time was 2d Lieutenant of Engineers and Adjutant of 553d

Engineer Service Battalion, Camp Humphreys, Va. Present address is care Erlanger & Galinger, Inc., Manila, P. I.

The "Transcript" prints the following about Lawrence B. Chapman, Course II:

> President H. S. Drinker of Lehigh University has announced the appointment of Lawrence B. Chapman as associate professor in the new course of ship construction and marine transportation which was instituted a year ago in the department of civil engineering.
>
> Professor Chapman is a graduate of the course in naval architecture and marine engineering of the Massachusetts Institute of Technology. He taught for a time at the Institute and was later assistant professor of mechanical engineering in the University of Maine. He has had long and varied experience on engineering and naval architecture work with leading concerns in this country and England. Since 1915 he has been on the technical staff of the Electric Boat Company at New London, Conn., engaged on technical problems of submarine design and construction.

Carl Lovejoy writes as follows:

> I hope you will be able to persuade many to take their pen in hand, or typewriter on their lap (blonde, brunette or Corona), and write you something.
>
> I have just returned from a visit to my parents in Quincy. Do you know I haven't a word to say about your ten-cent car fare, for we in Pittsburgh have just been without trolley service for two weeks. The public service corporations are up against it these days.
>
> I am still with the Pittsburgh Testing Laboratory, mainly on testing asphalt paving, with a little selling and some more chemical work thrown in. Have not grown rich, nor do I ever expect to on a salary.
>
> On the Fall River boat from New York to Boston my young son, aged two and a half, was enjoying himself immensely, playing with an earnest-looking first lieutenant of Engineers, who proved on closer inspection to be A. B. Merry. He had recently returned from France, and was then on his way to Martha's Vineyard with his wife. After a short vacation is going back with Westinghouse, Church, Kerr.
>
> This fall I walked into Bill Kelly, 1909, in a hotel in Akron. They had the S. R. O. sign out as usual, and he very kindly offered to put me up. Did not have to take him up on his offer after all.
>
> Some time ago I was out to Stuart Henderson's. He has a fine family: one girl and two boys.
>
> Boston did look good to me. I have never felt really at home elsewhere. Maybe I shall live there again some day. I am willing.
>
> What are the plans for a ten-year reunion?

To 1910 has fallen the honor of the editorship of the Technology book of war service. This work is being handled in good style by Johnnie Ruckman, and it is certainly up to us to see that his own class backs him to the limit. The following is what the newspapers have to say about it:

> Capt. John H. Ruckman, son of General John W. Ruckman, is in charge of the publication of the work which will be issued by the Massachusetts Institute of Technology telling the story of the part played in the war by graduates and students of the school. The work will take a year and the publication will consist of two large volumes. Captain Ruckman is a graduate of the Institute. During the war he served on the staff of General Joseph P. O'Neil.

We also "see by the papers" that Captain Ruckman was married to Miss Mary Armstrong at her home at Wilmington, Delaware.

It is lucky we have the papers to inform us as Ruckman sent us no word—unlike Nat Seeley who considerately sent the secretary an announcement of his marriage to Miss Louise Talbot Zollinger in Washington on September 27. Mr. and Mrs. Seeley will be at home after November 1 at 11 Ash Street, Flushing, New York.

Charlie Greene, former secretary of the class, has been kind enough to attend meetings of committees on Technology War Records and the Alumni Fund while your secretary was out of town, and is assisting in the class work on the Fund. It is too early at this writing to announce the names of the 1910 Committee on the Fund.

Regarding this matter of the Ten-Year Reunion that Carl Lovejoy mentions in his letter above, at the present time plans are being made for this historic event. Herb Cleverdon is back from sunny France, so that at least three of the committee who were in charge of the events of the big all-Tech Reunion will be on the job.

Don't forget the Alumni Fund:—Give or Get!

Lieut. Samson K. Cohen, Course I, of 42 Waverly Street, Roxbury, Mass., has received a reserve commission from the War Department, promoting him to the rank of captain, United States Reserves. He was commissioned in the spring of 1917 and served with the 101st Engineers, taking part in every campaign of the 26th Division. He received gas burns at Chateau Thierry. Captain Cohen is an English High School Franklin Medal winner and was graduated in the Civil Engineering course at Technology with the Class of 1910. He was employed in Major-General Goethal's office in the Canal Zone before the war.

Fill out and send in YOUR blank for the Technology War Record Book.

1911

ORVILLE B. DENISON, Secretary, 63 Sidney Street, Cambridge A, Mass.
HERBERT FRYER, Assistant Secretary, Engineers Club, Boston, Mass.

Every Man's Job — Work for the Technology Educational Fund.

It is with profoundest regret that your secretary chronicles the passing of two classmates: George B. Curwen, III, X and William R. Wheeler, II. Details regarding the deaths are lacking, information in each case having reached the Institute Alumni Office via the Postoffice Department.

Classmates will learn with deep regret, as did the secretary only recently, of the death of Mrs. Leslie Gordon Glazier, wife of Captain L. G. Glazier, VII and mother of the 1911 class baby, Phyllis Gordon Glazier. Certainly Gordon may feel that the deepest sympathy of the class, individually as well as collectively, is with him.—He told the secretary recently that Captain George ("Heine") Kenney, I, is back from France and is at present Commanding Officer of the 8th Aero Squadron at McAllen, Texas. "Heine" came home the proud possessor of a Distinguished Service Cross, five American and two French citations. Fine work!—E. M. Young, I, has just been transferred to the Philadelphia office of Stone & Webster.—The secretary has started work on the $10,000,000 Endowment Fund as far as 1911 and has a general committee: Barker, Dennison, Fryer, Herlihey, Van Tassel and Frank Wood. In addition twenty-four solicitors have been appointed for Boston and vicinity and twenty-nine regional solicitors for the rest of the county as follows: Massachusetts: Aaron, Buckley, Burleigh, Clark, Coburn, Comstock, Cooley, H. M. Davis, Dolliver, Ell, Faunce, Glazier, Haines, Hall, Hallett, Jenks, Leary, Loud, Merrill, Pead, Stewart, Vose, Whitcomb, Wilkes; New York City and Brooklyn: Campbell, Ferris, Parker, Seligman; New York State: Barr, Duffett, Lougee and Taylor; California: Davis, Connecticut: Hayman, Tisdale, D. C. Gaillard; Illinois: West; Maine: Copeland; Maryland: Herr; Michigan: Greenleaf; New Hampshire: Caldwell; New Jersey: Scoville; Ohio: Odell, Stevens; Oregon: McAllen; Pennsylvania: Grossmann; Rhode Island: Morey; Texas: Forristall; Vermont: H. S. Lord; Virginia: Frazier; Washington: Foster Russell; Wisconsin: Polhemus; Canada: H. S.

Smith. By the time this REVIEW appears you probably will have subscribed yourself and influenced others so to do, but if you haven't, DO IT NOW!

The ranks of the benedicts have been considerably strengthened in numbers since the last issue appeared, witness the following items of interest. The Providence (R. I.) "Evening Bulletin" said on June 19:

> An attractive wedding took place last evening when Miss Barbara Russell Stone, daughter of Mr. William Sidney Stone and the late Mary Elizabeth Russell Stone of Providence, was married at seven o'clock at her home on Gano Street to Mr. Willis Kennedy Hodgman, Jr., Massachusetts Institute of Technology, 1911, son of Mr. and Mrs. Willis Kennedy Hodgman of Taunton. The ceremony, which was witnessed by the relatives and intimate friends, was performed by Rev. Dr. Augustus Mendon Lord.

Announcement was later received by the secretary as follows:

> Mr. and Mrs. John Spence Howard announce the marriage of their sister, Sophie Howard, to Mr. Maurice Raymond Thompson on Saturday the sixth of September, St. Alban's Church, Washington, D. C.

Then followed this one:

> Mrs. Louise Fletcher announces the marriage of her daughter, Carolyn Louise, to Mr. Edgar L. Woodward, on Tuesday, the sixteenth of September, New York City.

Next in chronological sequence comes the announcement of a 1910 man, "Nat" Seeley, who spent a lot of time and therefore made a lot of friends in 1911:

> Mrs. Harvey Kauffman Zollinger announces the marriage of her daughter, Louise Talbot, to Mr. Nathaniel Stevens Seeley, on Saturday, September the twenty-seventh, in the City of Washington.

The young couple will be at home after November 1, at 11 Ash Street, Flushing, New York.

Then in October came the following:

> Mrs. Ida Jane Nickerson announces the marriage of her daughter, Esther, to Mr. Roger Perkins Loud on Tuesday, the seventh day of October, Boston, Mass.

To Hodgman, II, Thompson, XIV, Woodward, VI, Seeley, II, and Loud, VI, are extended hearty congratulations and best wishes for future happiness and success.

Four new '11 babies have been reported. The following letter was received from Mayo Tolman, '13:

> You may be interested as a class note that on May 22 Elizabeth Adams Tolman was born. Mrs. Tolman, as you may recall, was Ruth Dunbar of your class. She has been in Massachusetts ever since the death by drowning of our youngest son, but is returning to West Virginia about the first of September to take up work as bacteriologist and pathologist for Pierce & Tolman.
>
> You will be glad to learn, I know, that J. B. and my business bids fair to be successful.

Hearty congratulations on the new arrival and "more power" to the firm of Pierce & Tolman.—Mr. and Mrs. Chester L. Pepper were made happy by the arrival of Emilie Lawrence, weight six and one-half pounds, on June 29, 1919. Databoy, Chet!

Here's an announcement from sunny California:

> A little son named William Thomas has safely arrived at the home of Mr. and Mrs. A. C. Pillsbury, born July 29; weight nine and one-half pounds. Some boy!

O. W. Stewart, I, writes:

> Now comes the second boy, Pearson Haslam Stewart, August 21, 1919, and everybody well. I figure that means M. I. T., 1941, at least. Hope you will keep up with procession.

Nice work, O. W., and thanks for the encouragement.—Official confirmation of a rumored partnership reported in the July REVIEW came upon receipt of the following:

> Thorne L. Wheeler and John C. Woodruff announce that they have formed a partnership for the general practice of Chemical Engineering under the firm name of Wheeler and Woodruff, with offices at 280 Madison Avenue, New York.

Both young men are Course X graduates, and veterans of the Chemical Warfare Service. May their success be permanent!—A postcard from G. L. Gilmore, '90, sent from Paris in mid-June, read, in part, as follows:

> Met Lieut. John MacKenzie, of your class, wounded at Arras September 2. Now in Canadian Officers' Hospital, Buxton, England. Wound not healed.

J. D. is a popular Course III man and let's hope he is quite himself by now.—Paul A. Cushman, VI, has left Pennsylvania State College, where he had a professorship, and is now an assistant professor of mechanical engineering at the Brooklyn (N. Y.) Polytechnic Institute, according to the Brooklyn (N. Y.) "Eagle" of September 23.—Capt. Emmons J. Whitcomb, X, has returned from his army service and is once again manager of the Boston office of the Raymond & Whitcomb Company.—Capt. Richard H. Ranger, IX, is back from France and is now at the Signal Corps Laboratories, Camp Vail, Little Silver, N. J., working on some radio development that was started on the other side. He writes that he expects to be tied up in this present line "for perhaps several months."—Now for some address changes to close.

CHANGES OF ADDRESS

D. P. Allen, Southeast Fifth and Pleasant View, Des Moines, Iowa.—C. S. Anderson, 316 East Clay Street, Butler, Penn.—Donald C. Barton, 89 Trowbridge Street, Cambridge, Mass.—George A. Cowee, 41 Edgell Street, Gardner, Mass.—Professor Rufus Crane, Ohio Wesleyan University, Delaware, Ohio.—Milton E. Hayman, 36 Pearl Street, Hartford, Conn.—John L. McAllen, 163 Twelfth Street, Portland, Oregon.—Leonard O. Mills, 213 Walnut Street, Holyoke, Mass.—I. F. Morrison, 140 School Street, Braintree, Mass.—William C. Salisbury, Globe Automatic Sprinkler Company, 214 Loan and Trust Building, Minneapolis, Minn.—Houghton H. Whithed, Anderson Supply Company, 111 Cherry Street, Seattle, Washington.

Fill out and send in YOUR blank for the Technology War Record Book.

1912

RANDALL CREMER, Secretary, 7 The Circle, Rochelle Park, New Rochelle, N. Y.

Every Man's Job — Work for the Technology Educational Fund.

Well the endowment campaign has opened with a rush. Those of us who had a perspective on what 1912 did in the Big War have very little doubt that she will respond just as nobly to this almost as noble cause. Of course we are still handicapped in comparison with the older and wiser classes, but just look at the income taxes we are escaping Come across, 1912. This isn't charity, but you can let it go at that on your returns. As they are said to say in Boston, " Each inconsiderable consideration assists."

Judging by results, war is not all hell. Of course a skeptic could refer to the frying-pan and the fire, or singeing of wings, etc. Let us be more kind and say that the experience of the great struggle has infused courage into some of our backward material. Something seems to be urging them to the fatal step of matrimony. Note the following:

Mrs. John T. Paine announces the marriage of her daughter Myra to Mr. Allen Willard Reid, on Saturday, the sixteenth of August, nineteen hundred and nineteen, York, Pennsylvania.

Mr. and Mrs. Frederick Sopwith Morley announce the marriage of their daughter, Gertrude Evangeline, to Mr. Albion Richmond Davis, on Saturday, June the twenty-first, Rocky River, Ohio.

At home after the first of August, Boston, Massachusetts.

Mrs. Ellen Riordan announces the marriage of her daughter, Mary, to Mr. George A. Robinson, Boston, Massachusetts, on Wednesday, May the seventh, nineteen hundred and nineteen, Washington, D. C.

At home after June the first, 237 Rock Creek Church Road.

Mr. and Mrs. Gilbert Henry Denton have the honor of announcing the marriage of their daughter, Karen Irene, to Mr. Rudolph Herzer Fox, on Tuesday, the twenty-seventh of May, one thousand nine hundred and nineteen, at one thousand seven hundred and twenty-four Gaylord Street, Denver, Colorado.

When they are not out, Mr. and Mrs. Rudolph Herzer Fox are at home at forty-one Hague Avenue, Detroit, Michigan. History has not as yet recorded what work Foxo is undertaking in Detroit, but no doubt we'll know in time.

For the present, we can all take the word of those of us who were fortunate enough to know Karen Denton in the faraway Prom days, and who still mourn the loss of her brother, William Byers Denton, 1911, and join in hearty congratulations.

Mr. H. D. MacDonald, III, who is with the Aravaipa Leasing Company at Klondyke, Arizona, writes as follows:

I am located here, for a while at least, and am chief engineer on a big development game. I sure have some job on my hands, as the property extends lengthwise over ten miles with work going on at both ends and middle. This is the first time I had a transit in my hands since leaving Tech, but everything is coming back to me and I am getting on finely.

I don't imagine I would care to spend my entire lifetime in this country; it is too hot and dry and I sure do like to see a real tree once in a while; however, I am getting lots of good experience.

Here's some good news about Cummings, which appeared in the September " American Society of Mechanical Engineers " Journal.

Lawrence T. Cummings, one of the senior engineers of Miller, Franklin, Basset & Company, consulting industrial and production engineers of New York City, has resigned his position in order to assume the duties of vice-president with the firm of Drefs, Cummings & Drefs, Inc., business consultants, Detroit, Mich.

The following excerpts are from a letter received from J. L. Bray who was last heard from at Rancagua, Chile. He is now with the New York and Honduras Rosario Mining Co., at San Juancito, Honduras, C. A.

I had a very pleasant trip from the States, for coming by way of the canal, I was spared the discomforts of the trip across the country from the north coast. That takes about six days on mule-back from Puerto Cortez and is anything but a pleasure.

For the first few months after coming here, I was at Sabana Grande on the south coast. There the company has a mill consisting of a Blake crusher, Marcy mill, K. & K. flotation machines, Dorr thickeners, Oliver filter, etc. They have a high grade ore, the mill head running about seventy dollars in gold and silver. I finished the construction work and started up in February. When I left we were making as high as ninety-two per cent recovery. Transportation is entirely by ox-cart or mule-back, hence the necessity of milling such a high grade ore. Fuel oil engines are used for power and you can imagine the milling cost with fuel oil at eighteen dollars, United States currency, per barrel.

At Sabana Grande we really have a delightful climate. The mine is at an elevation of some three thousand five hundred feet which takes us out of the fever districts of the coast. The rainy season lasts for about five months out of the year, the rest of the time we have a climate much like Southern California. When it does rain, though, it is no Boston drizzle, but the hillside seems to fairly spout water.

About two months ago I was transferred here to take charge of the cyanide mill. Here the company has its main plant and, considering the isolated location, a very complete one.

They employ about one thousand eight hundred natives and have some thirty contract men on the staff. The mill consists of stamps, tube mill, pachuca tanks and Merrill presses. We have a rather unusual crushing system for, with only twenty stamps, we get through over four hundred tons per day. We are also using aluminum precipitation and find it very successful. The mill turns about $160,000 in bullion per month.

I used to think that Chile and the other South American countries were uncivilized and backward, but I must hand it to Honduras as being the worst of the lot. There is only one railroad in the country and that a short line on the north coast for the transportation of fruit. All transportation is by either mule-back or ox-cart, usually the former for there are very few roads in the country. Our freight here costs us about nine pesos per carga from San Lorenzo on the south coast to San Juancito, a distance of one hundred and twenty miles, at the rate of two cents per pound, twice as much as the freight from New York to the coast. Labor is cheap, but very inefficient, for the whole town gets drunk every Sunday and spends Monday and a part of Tuesday in sobering up. Everything is done by hand; at Sabana Grande every stick of timber and every board in the mill was cut by hand.

Here at San Juancito we do not have as good a climate as at Sabana Grande. It is in the interior of Honduras and on the Atlantic slope, so we get a great deal more rain. No fever though for the camp is at an altitude of some five thousand five hundred feet which takes us out of the fever districts.

There is a great deal of talk now of a revolution when the next elections are held. The present president, Bertrand, is trying to elect his son-in-law and thus keep the office in the family. Since they control the army it looks as if they may be successful but not without some trouble. Revolutions in the past have not been very bad, so I do not think that there will be any trouble for the Gringos.

Harold H. Sharp, writing from 1112 Mills Building, El Paso, Texas, states that since last October, he has been connected with the new Veta Grande Unit at Parral as assistant superintendent, and has been associated with Mr. Bernard MacDonald in constructing a thousand ton cyanide plant, which they believe the finest mill of this type in Mexico.

The revolutionary conditions have, of course, been handicapping them greatly, and, since Villa took Parral and cut all the railroad lines, their work has been greatly curtailed. After the fall of Parral he came out to the border, and has been there for about six weeks. He expects, however, to return again in a few days, but his address continues El Paso.

Vincent Gallagher, to show that Tech gives us the broadest training there is, entered the field of business after leaving the naval aviation service and is now manager of the Business Development Department of the American Eagle Fire Insurance Co., the Continental Insurance Co., and the Fidelity-Phoenix Fire Insurance Co., with offices at 80 Maiden Lane, New York. He is now living at 60 Siwanoy Street, New Rochelle and may be seen most any morning on the New Haven, 7.59, in good company, at least part of the time. This much we know.

He tells us that Todd Greenleaf is now with the Henry Horst Construction Co., at Moline, Illinois. Harry Babcock is assistant professor of Physics at Northwestern University, and is building up a promising business as consulting engineer. His address is 2207 Sherman Avenue, Evanston, Ill. Link Barry is with the Ingersoll Watch Co. at Waterbury, Connecticut.

We had the good fortune to run into Mayo Tolman on Fifth Avenue, the other day and during a subsequent session pumped the following account out of him:

After graduation he spent some time with the Massachusetts, and later the Maryland State Board of Health, becoming resident engineer at Hagarstown, and then director and chief engineer of the Department of Sanitary Engineering of the West Virginia Department of Health, at Charleston, W. Va. Later on he assumed the duties of superintendent of filtration for the West Virginia Water and Electric Co., and of bacteriologist at Nitrate, W. Va. In 1917, he went to Guatemala as bacteriologist with the Red Cross Relief Commission to Central America. He is now dividing his time between New York, where he is acting as health director of the Community Council of National Defense and delivering lectures at the New York School for Municipal Workers, and Charleston, W. Va., where he is a partner in the firm of Pierce & Tolman, Chemical and Sanitary Engineers, with headquarters in the Virginian Land Bank Building. He is secretary of the West Virginia Engineers' Association, and president of the Tech Club of West Virginia. How do these men get along with only a twenty-four hour day?

Bill Lange is back in New York again, with the Suburban Engineering Co., at 15 West 38th Street.

Harvey Benson, after obtaining his discharge from the army, became factory manager with the Caskey Dupres Manufacturing Co., at Marietta, Ohio.

Harry F. Ferguson is now with the Illinois State Department of Health, at Springfield, Ill.

Bill Lynch is with the Aluminum Company of America, Realto Building, San Francisco, Cal.

Harold Fox, recently major in the British Service, has gone to Georgetown, capital of British Guiana, as district engineer of the Department of Public Works.

Stuart C. Sargent is now with the Baltimore Shipbuilding and Drydock Company at Baltimore, Md.

Howard F. Clark, major, United States army, is back at the Stute, as professor of Military Science and Tactics.

Arthur W. Frank is now commander in the Construction Corps of the Navy and stationed at the Charlestown Navy Yard.

Ralph T. Hanson has the same rank, and is stationed at the New York Shipbuilding Corporation, Camden, N. J.

Eddie Montgomery, major, United States army, is stationed at Fort H. G. Wright, New York.

Walter Ruby is with the E. W. Bartholomew Lumber Co., at Oneida, N. Y.

Wellesley Seligman is with Hartmann Bros., at 8 Wall Street, New York City.

Bernard H. Morash sends the following account of himself from Schenectady, N. Y:

I went with the General Electric Co., after graduation, spending three months on the dirty test and then went into the Foreign Department, Schenectady. It was the usual kind of commercial engineering, with not much money, but interesting work connected with many foreign countries. There were plenty of Tech men in the organization, but few from our class. Fat Kimball was in the Foreign Department, weighted down with that sunny disposition of his. H. E. Dexter was in the Engineering Department, and we had the time of our lives camping out two summers with plenty of canoeing, tramping, and the sweet things that generally make life more interesting (when you are young). Well in 1915 I was offered a position to go to Japan with the General Electric Co., for three years. It looked good to me, and after a trip to Nova Scotia and the Panama Pacific Exposition, I left the hospitable shores of the United States of America, arriving in Japan in July. What I regretted most in leaving when I did, was missing the great reunion and opening of the new Tech.

During my three years in Japan I have been in charge of the engineering and commercial work of our company, and it has been a great experience and very interesting. Electricity for lighting is probably more widely used in Japan than in any other country. This is surprising, but it is due to the abundance of water power throughout the country, the density of the population, character of dwellings and mode of living, and relatively small area of the settled parts of the country. Japan is very mountainous, of volcanic origin, and only about eighteen per cent is under cultivation. The topography of the land is such that there is practically no possibility of water storage, but water power developments are abundant and increasing. There are many steam plants also, one in Osaka of one hundred thousand kilowatts, normal capacity. There are many high tension transmissions of sixty-six thousand to one hundred and ten thousand volts, and electric railways hold a very important place.

In April, 1918, I made a trip through Korea and Manchuria, to Pekin, Hankow, and Shanghai, which gave me some idea of this great section of the East, but not sufficient to write a book explaining what is wrong with China and prescribing the one and only remedy as most of our American Cook's tourists are able to do.

There is no "Tech" organization in Japan, at least no active one. Dr. T. Dan, the head of the Mitsui Co., represents the alumni, but he thought the men were too scattered over Japan to get them together periodically at reunions. Before I left, he was of the opinion that some sort of gathering might be arranged annually, and he expected to do something in the near future.

I had made arrangements to return to America last September to join the engineers, but it was not possible to get away before December, and after the armistice was signed, all my plans had to be changed. My stay was extended to February, and I finally left on the "Ecuador" on February 9, reaching Frisco on March 1.

My address for some time will be, care of International General Electric Co., Schnectady, N. Y.

The following excerpt from the "Providence Journal" of March 23 has just come to our notice. It is part of an article entitled "A Town that is Banishing Illness," and features a photograph of Fred Dodson, Health Officer.

"Spotless Town" would apply to Framingham, Mass., in a number of ways, and in no sense would the term be more applicable, more honestly deserved than with regard to its health conditions. In this respect it seems to be the leader among Massachusetts communities, and to have an enviable ranking with the Federal health authorities at Washington.

Sickness exists in almost a negligible quantity at Framingham. Not that it is to be understood that the few physicians of the town have been obliged to seek some method of gaining a livelihood other than by making professional calls and writing prescriptions. Not that the undertakers have found it necessary to divert their attention to other business, and that the druggists now spend the greater part of their time at the soda water and candy counters, but that through wonderfully efficient co-operation and co-ordination, enviable health conditions have obtained in Framingham.

The town made its health department one of utility and efficiency, rather than one of ornament, by establishing at its head, three years ago, Fred S. Dodson, A. B. Mr. Dodson was graduated from Andover in the class of 1897; Yale, in the class of 1901, and the Massachusetts Institute of Technology in that of 1912, specializing throughout in chemistry and bacteriology, and it is his knowledge of these sciences and the application of them in a most practical manner that has counted largely for Framingham's almost sickless condition. Before going to Framingham, he was connected with the Co-operative Board of Health, whose headquarters are at Wellesley Hills, Mass.

The machinery of the health department is simple but efficient. Like a perfect piece of mechanism, each part moves in absolute harmony with the whole, Executive Officer Dodson being the director. The offices of the department are in the Wilsonia, one of Framingham's attractive business blocks, and one of them is the community health station under the immediate control of Dr. Challis Bartlett, whose aim is that of locating every case of tuberculosis there may be in the town.

Henry Donald Kemp, Course VI, a native of Boston, died recently in Montreal, Canada, where he had been in business. Kemp was in his twenty-ninth year and was a native of Boston, the son of Mr. and Mrs. Clarence C. Kemp, who live at 108 Mt. Vernon Street, West Roxbury.

He studied electrical engineering at Technology, and was graduated in the class of 1912. For some time he was superintendent of the British Munitions Company, Ltd., at Verdun, just outside of Montreal, where he had charge of all the work of that concern and was the only American among four thousand Canadians. Later he was head of the production department of an ordnance concern at Hastings-on-the-Hudson, N. Y., and was about to go into service when changes in governmental regulations precluded him from entering the branch to which he aspired. He then went back to Montreal to engage in business there.

News has just reached us of the marriage of Vernon Gregory (Doc) Slan to Marion Squire Hill, on Saturday, October 18, at Arlington, Mass. Who can say that the high cost of living has retired the good old-time school-day romance? Good work, Doc, we all knew you were a sticker.

Fill out and send in YOUR blank for the Technology War Record Book.

1913

F. D. Murdock, Secretary, 438 Huntington Avenue, Buffalo, N. Y.

Arthur W. Kenney, Assistant Secretary, 1214 West 10th Street, Wilmington, Del.

Every Man's Job — Work for the Technology Educational Fund.

Some time last summer "Bob" Nicholas, I, was married to Miss Beatrice Powell, Wellesley 1918.—L. C. Rosenburg, IV, when last heard from had safely returned from fifteen months continuous active service at the front. He expects to be married to Mary Louise Allen of Helena, Mont.—Back in April B. L. Cushing, II, was married to Florence G. Beal.—Gene Macdonald, I, was married on the twentieth of August to Muriel Parker.—On October 8, F. H. Achard, VI, was married to Florence Baub at Pittsburgh.—The engagement of Miss Bertha Gorman is announced to Milton Roe Sabin.—We have for introduction three new class babies, Jean Louise Hopkins, James Pascal Tennant and Elizabeth Jane Bryant. It is almost needless to explain that the happy fathers are C. H. Hopkins, IV, Joe Tennant, VI, and W. A. Bryant, I.

Louis C. Rosenburg, IV, saw active service on five sectors, including St. Mihiel, Argonne and Brest. He is now a full professor in the University of Oregon in the School of Architecture.—Paul J. Franklin, IV, is in the Architectural Branch of the Engineering Department of the E. I. duPont de Nemours and Company at Wilmington, Del.—Stanley H. Davis, VI, is out of the navy and back on his job as power engineer for the Toledo Railways and Light Company.—Gordon Taylor, XIV, saw fifteen months of overseas service and is now taking up work in the physics department in the University of Wisconsin.—When he isn't busy entertaining his nine-months-old, twenty-pound boy, Edgar Menderson, II, is busy as vice president and sales manager of the Mason Towle Company of Cincinnati.—Robert A. Lesher, IX, is with the New York and New Jersey Port and Harbor Development Commission doing research work on shipping. He is located in New York.

John Turner, II, has recently started the Pneumatic Universal Tool Company of which he is vice-president and general manager, doing business in New York City.—E. T. Dobbyn, VI, is chief draftsman of the Navy Department at the Ford Eagle Plant, Detroit, Mich.—F. D. Rich, X, is manager of the Sales Service and Advertising Department of the Crescent Belt Fastener Company of New York City. Read his optimistic note: "Really I can conscientiously say that I was doing my part, as ninety-six per cent of our product was going to essential industries to help them save power, belting and fuel, and keep the wheels of production humming. Run across Tech men all the time on my travels, and in selling work and find that quite aside from the cordiality which is always extended a fellow Techer the breadth of views, willingness to learn and desire to be shown are decidedly more pronounced than on the part of graduates of many other technical schools. Incidentally it is gratifying to find so many Tech men either at the heads of plants, or close to the top in the bigger organizations. To many of you Technology men who the present times will be sending out on to untried roads of commerce I say: look up the Tech men in the cities you visit. You'll find them always interesting, unfailingly cordial, friendly and anxious to keep you in your new surroundings. And the bright atmosphere—bright though smoky as the 'Union' will fill your heart with cheer though your day may have been dismal."—Algernon Gibson, III, is out of the navy and back on his job as secretary and treasurer of the Lawrence Warehouse Company. "Al" writes that he will surely be present at our big reunion next summer, and further he will make a speech. That is some inducement to be present.—Sam Knight, VI, is back again on the range with his "cows, ponies, and better seven-eighths." Sam writes that he is henpecked but he is just fool enough to like it.—P. L. Flansburg, VI, is plant engineer in charge of efficiency and safety work for Benjamin Eastwood Company of Paterson, N. J.—F. W. Selfridge, II, was discharged May 10, after having spent a year in France with the 302d Mobile Ordnance Repair Shop in charge of small arms and machine gun repairs.

F. H. Pendleton, Jr., V, is chemist for the Gorton Pew Fisheries Company at Gloucester.—Malcolm Lewis, VII, is with the Nestle's Food Company as sanitary inspector of condensed and evaporated milk. They operate factories in New York, Pennsylvania, Ohio, Michigan and Wisconsin. Malcolm writes: "Was personal adjutant, supply and summary court officer for S. C. Detachment of one hundred negroes at Camp Beauregard, Alexandria, La., and assistant camp sanitary engineer. Principally employed on antimosquito oiling and draining, latrine maintenance and any other work the 'line' was too proud to do. A great life and enjoyed the 'coons.' Mostly Creoles from 'N 'Yawleens,' and speaking French (own brand). Our 'top kick' was formerly in the 10th Cavalry, sixty-two years old, spry as a man of thirty, jet black with not a white hair. Had seen nearly forty years of service. Awarded the Congressional Medal of Honor during the Indian wars when a private and again recommended for it in the Spanish-American War."—Effie Macdonald, V, has bought a farm and is devoting herself to the work of helping increase the world's food supply.—T. R. Collins, X, is with the Patton Paint Company, Newark. —R. K. Wright, VI, is head of the electrical department of the Baldwin Locomotive works at Landsdowne, Pa.—T. S. Byrne, IV, is vice-president and Fort Worth manager of W. C. Hedrick Construction Company.—Joe Tennant, VI, is as busy as ever. Read some of the things that a busy man finds time to do. "Built two power plants for Emergency Fleet Corporation Ship Yards last year and witnessed the 'building of the ship.' At present we are shipping oil pumping equipment to Cuba for all of the Sinclair Cuba Oil Co.'s terminals for handling Mexican crude on the island. Spent a week in Havana in June and met a number of Massachusetts Institute of Technology men all doing well, 13-ers doing exceptionally well. Would modestly suggest that our 1920 reunion be held in Houston, but if the majority of the class insist Boston or Cambridge you may count on my being present. Understand that! Our classmate F. C. Weiss, VI, built ninety miles of one hundred and ten thousand volt transmission line through northern Alabama wilderness in ninety days, and that is going some. Long line, Kitty. Am very busy but always have a day off to entertain when a 1913 man can get that close to Houston."

Charles L. Burdick, III, spent five months in Chili, and has returned now to be permanently located in New York as research engineer for the Chili Exploration Company.—Fay Williams was discharged from the Ordnance Department, United States army, after two years service and is assistant superintendent of the Walker & Pratt Manufacturing Company of Watertown, Mass.—After having built two sawmills in France and operated three of them, A. M. Mutersbaugh, I, is back in Lake Charles, La. He was married this summer, and we regret that his announcement has gone astray, so that we cannot give the lady's name.—Gene Macdonald, I, left the latter part of October for Florida where he is to do some work for the Highway Commission of that state.—George A. Taylor, II, is at Rockhill, S. C., holding a position as engineer with the Anderson Motor Car Company.—E. C. Gere, I, is a first lieutenant in the regular army stationed at Camp Stotsenburg, Pampanga, P. I. He expects to resign from the army shortly and return to this country.—George B. Sampson, II, is selling Fords in New Britain, Conn. He is looking forward to the old ball game for our reunion next summer. He suggests that inasmuch as so many men are married the teams would have to be made up of men who have children and men who have none. This seems to be a good suggestion.—David V. Nason, X, is a member of the firm of Helburne Thompson Company, sheepskin tanners, with factories at Salem, Mass., Johnstown, New York, and Gloversville, New York.—"Jimmy" Russell, II, is general manager of the Claysmith Company, Incorporated, at West New Brighton, New York.—Dick Cross, VI, is holding forth in Madrid. He is in charge of Spanish business for the Aluminum Company of America.

Y. H. Hsin, I, is the Hankow Branch Manager of the Han Yeh Ping Iron and Coal Company, Limited.—Edward Germain, II, is general manager of the Harlan Plant of the Bethelem Shipbuilding Corporation, Limited, located at Wilmington, Del.—Lee Bowman, IV, is architectural draftsman with C. R. Whitcher of Manchester, N. H.—When we heard from him in August, Arthur Carpenter, X, was just back from fifteen months' service in France. He did not then know where he was to be located.—Austin K. Wardwell, I, after having made two trips to France as assistant navigator, United States Ship "Mercury," is back in New York City in the construction department of the Erie Railroad.

L. H. Lehmairer, III, is the Australian representative of the Guaranty Trust Company of New York City.—The engagement is announced of Miss Florence L. Daub to Captain Francis H. Achard, VI, who has recently returned from France.

Fill out and send in YOUR blank for the Technology War Record Book.

1914

H. B. Richmond, Secretary, 12 George Street, Medford, Mass.

Elmer E. Dawson, Jr., Assistant Secretary
28 Washington Avenue, Winthrop, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Let's go! We're off!

It has often been said that it takes a college graduate five years to find himself. Our five years are spent. We have found ourselves and now we must be prepared to make every step an advance. If we have floundered through the mud for five years it has been only to place ourselves on a firmer foundation stone. As we have gone forward we have come to realize more and more how valuable are the friendships we made on Rogers steps. It is with increasing interest that we look in each issue of the Review for the notes from our classmates. Fourteen places itself on record as agreeing to do its full share in the work of the Alumni Association and to aid in making the official publication — the Review — a success.

When your secretary took over his duties at the time of the five year reunion he found that the class list was very much out of date. He also found that there were many members of the class who were not subscribers to the Review. To bring about a reorganization a questionnaire was sent out to about five hundred men who have been associated with 1914. In order to insure that each questionnaire would reach its destination or be returned to the secretary these questionnaires were sent by first class mail. A return stamped envelope was enclosed with each blank. It is accordingly fair to assume that any questionnaire which did not return unclaimed or filled out had been received by the person to whom it was sent. The cards of those persons whose questionnaires have not returned have been placed in an inactive file. If your card is in that file and you desire to have it removed please send in your questionnaire at once.

To every person who returned his questionnaire a copy of this issue of the Review is being sent. To those who are non-subscribers a letter is being mailed inviting them to join the class circle by subscribing to the Review. It is endeavored to have every active member of 1914 a subscriber.

When the questionnaire was sent out it was planned to use the data in compiling a register of 1914 men. Owing to the fact that the replies have been somewhat slow in coming in, and as it is very probable that a complete alumni register will be published at an early date, this plan has been abandoned. The current addresses of the entire class will be published in the Review. By following this list from month to month it will be possible for every member to have an up-to-date address list. Other features as covered by the questionnaire will appear from time to time.

Warning! The secretary is going to assume that the data as furnished by you on your questionnaire will remain unchanged unless you notify him to the contrary. If next spring or summer you should see published in the Review some facts about yourself which are three or four months out of date, do not blame the secretary. Please notify him of all changes in the original information as furnished by you. If you change your address it is not necessary to write two letters, one to the class secretary and one to the Review. Write only to the class secretary and request him to have your Review mailing address changed.

Because of the great conflict through which the world has just passed our list of classmates who have departed from us is unusually large. This list already contains twenty-eight names as follows:

IN MEMORIAM

Edward Porter Alexander, I, October 22, 1918. Died of disease. A. E. F.
George Albert Beach, II, January 22, 1918. Airplane accident. A. E. F.
Chauncy Davis Bryant, XI, January 14, 1918. Ptomaine poisoning. A. E. F.
Richard Belmont Catton, VI, May 1, 1919. Died of disease. A. E. F.
James Barton Chadwick, II, November 4, 1918. Pneumonia. In army.
Axel Cornelius Ecklond, VI, March, 1912.
Robert Turnbull Gookin, V, December 12, 1918. Pneumonia.
Gordon Baker Greenough, X, May 1, 1918. Pneumonia. In army.
Theodore Hervey Guething, II, October 15, 1918. Pneumonia. In army.
William West Hamilton, VI, 1916.
Edward Alexander Ingham, VII, January 2, 1919.
John George Kelly, Jr., I, March 18, 1918. Automobile accident. A. E. F.
Myer Levinson, X, October 4, 1915. Melancholia.
George Lewis MacKay, IV, April 17, 1918. Killed in action. A. E. F.
Benjamin Stanley Mann, III, December 4, 1917. Consumption.
Eric Wier Mason, III, August 12, 1917. Died of wounds. British Army.
Eralbert Talmadge Miller, I, October 13, 1918. Automobile accident. In army.
Alfred Standish Milliken, I, March 30, 1918. Killed in action. A. E. F.
Newell Willard Rogers, VI, August 1, 1918. Airplane accident. In army.
Leo Saloman, I, 1917.
Fred Eugene Sauer, Jr., I, January 30, 1919. Pneumonia.
Werner Theodore Schaurte, II.
Benjamin Silverman, II, January 15, 1919. At sea.
John Bouve Tenney, II, March 19, 1917. Accident at Scranton, Pa.
Leon Hubert Webber, VI, January 13, 1919. Pneumonia. In navy.
Hagen Barnes Woodworth, I, July 26, 1912. Died of disease.
Harold Rollin Worsley, I, February 9, 1919. Pneumonia.
Fong Teh Yeh, XIII.

The secretary wishes to extend the sympathy of the class to W. P. Houston, I; and to H. M. Keating, X, who have both been so unfortunate as to lose their wives during the past year. Sympathy is also extended to F. C. Atwood, XIV, and to Mrs. Atwood, who lost their only child on May 26, at the age of two weeks.

Our president, A. C. Dorrance, X, has taken up a new field of endeavor. He is now at Gloucester, Mass., as superintendent of the canning department of the Gorton-Pew Fisheries Co. Those who have been to Gloucester and have seen the size of the fishing industry there can well appreciate that Buck has a man-sized job.

S. W. Stanyan, VI, has resigned as head of the efficiency department of the American Can Co.'s Boston factory and is now doing similar work on a larger scale with the B. F. Goodrich Co. in Akron, Ohio. If he shows as much efficiency at Akron as he did in sleeping through Charlie Cross' lectures we know that the price of automobile tires will show a decided decrease.

Stanyan was not the only sleeper in those lectures. His side partner, E. I. Staples, VI, was a good sleeper too. Just to show that he is repentant Stape has signed up with the Case School of Applied Science as assistant professor of Electrical Engineering.

Dean Fales, II, too, is in the teaching game. He is still at Massachusetts Institute of Technology as instructor in Mechanical Engineering. Dean just cannot keep away from the 'Stute. On his questionnaire he made several statements supposedly authentic, then proceeded to state that an instructor was only equal to one-fourth of a street car conductor and accordingly advised us to overlook his statements. Cheer up, Dean, with the ten million dollar endowment salaries will be raised at least half of the decreased value of the dollar.

Walter Joseph Hauser, IV, has left the 'Stute and now enjoys the title of "Member of Egyptian Expedition to dig at Luxor for the Metropolitan Art Museum of New York City." Sorry to learn that the Museum has been removed from Central Park, but hope that it is discovered somewhere in the diggings. While you are digging, Walter, please keep your eye out for those members of this class who have not returned their questionnaires.

Just to make sure that you will remember which is which we will report that Walter George Hauser, VI, is assistant to the vice-president of the American Pin Co., at Waterville, Conn. Joe was the industrious architect, and George was a pal of Jimmie Judge, VI. Jimmie is the boy who furnished the secretary with all of the letter and questionnaire paper, as well as with several thousand envelopes. Extra fine glue on some of those envelopes.

G. K. Perley, VI, has resigned as superintendent of Bird & Sons' Norwoo plant and is now with the Holtzer-Cabot Electric Co. at Roxbury, Mass. A. P. Shepard, VI, has also left Bird & Sons and is now with the Liberty Mutual Insurance Co. at Boston. P. H. Taylor, II, however, has returned from France and is back with Bird & Sons, as plant engineer, at their East Walpole, Mass., plant

A. H. Waitt, V, is still as active as ever. Now that he has received his discharge as a captain in the Chemical Warfare Service he is with the Avery Chemical Co. of Boston, in their sales department.

L. B. Duff, III, has also received his discharge as a captain in the Chemical Warfare Service and is with S. E. Duff, Consulting Engineer in Pittsburg. Duff believes in keeping up a good custom and has named his son, Levi Bird Duff, IV.

Ross H. Dickson, X, reports from the Tech Club of New York that he is still in the Ordnance Department of the Army as a captain. Dick wrote us a very interesting letter furnishing material for several items of these notes. Let every one do the same.

Howell Taylor, IV, does the best he can in this respect. When he found that he could not attend the reunion he wrote a very interesting letter, then when the questionaire came out he sent in some more facts. He is in business for himself as advertising counsellor in Adrian, Michigan. The class wishes you the best of success, Taylor, and we know that you are making good.

V. M. F. Tallman, VI, is still with the Worcester Electric Light Co., as power sales engineer. He is one of the very few in the class who are still on their original jobs, — positions, I suppose they call them by this time. A large number of the class on the other hand have been employed in five different places, in most cases one of which is Uncle Sam, 1917-1919. To come back to Tallman, we wonder if he sings as well as ever and still has the curls which the girls used to adore.

Our ex-secretary is with Ballinger & Perrot, of Philadelphia, but has been stationed at Ballston Spa, New York, as resident engineer on a factory construction job. Cal reports that he is still single. Moving from place to place helps. Your present secretary always tries it as a last resort.

C. A. Corney, VI, is still with Stone & Webster, as an electrical engineer and has risen high enough to have his name on the door. Chet's main interest just now, however, is at home where he has Chester Albert, Jr., born on July 11.

H. A. Morrison, II, is transportation manager for the Scovill Manufacturing Co., at Waterbury, Conn. Bogs wants the class to start an anti-prohibition campaign. For the sake of the Course IV afternoon teas it is necessary for the class to remain nonpartisan. You might consult Dean Fales, or in a great emergency try Van Etten, Bogs.

Henry L. Gardner, I, writes that he has been wandering around the earth with no really permanent address, occupation, or habits, but that he has now settled down and is assistant chief draftsman for the Gilbert & Barker Manufacturing Co., at Springfield, Mass.

P. H. Hsu, V, is research chemist in joint charge of experimental soap plant of the Procter & Gamble Co., at Cincinnati, Ohio. Hsu beseeches us to put some more life in 1914. The life is there Hsu, but it takes TNT to get it out. It is well on its way as the excellent war record of 1914 shows. If any new methods must be used we will try soap next. Please submit quotation and confidential discount on kind and amount required.

H. M. Langdon, VI, is still with the same company that he was five years ago. He is with the New England Telephone and Telegraph Co., at Brockton, Mass.

E. C. Wente, VI, too is in telephone work. He is with the Western Electric Co., in New York City, as a research engineer. On his questionnaire Wente reports under "Date of marriage" — "No further progress to report." If you cannot find any other prospects why not look around your own office. The secretary has seen several there which might pass in a subway jam.

D. F. Gould, X, is a research chemist with the Barrett Co., in Philadelphia. Dave is married and the proud father of a year-old daughter.

Philip M. Currier, VI, is an electrical engineer with the General Electric Co., at Schenectady. Phil was married on the day we had our outing at Nantasket this spring. Next time please postpone the event one day so as to attend all reunions.

Our once famous merchant, Russell Alden Trufant, I, turns up as chief engineer of the Llano Grande Plantation at Mercedes, Texas. He has asked the secretary to notify all of his former customers that he is no longer in the second-hand clothing business and that all former patrons are recommended to try Max Keezer. Our only objection to that is that we no longer have any second-hand clothing to barter. We wear them down to the patches now. Trufant is also married and has an eight-months-old daughter. Daughter has not inherited her father's good looks.

Albert Emerson Schallenbach, II, writes that he had his name changed by court order to Albert Emerson. He is with the Vacuum Oil Co., as Technical Assistant Manager of the Western Division, with his office in the Fisher Building at Chicago.

R. D. MacCart, VI, and C. H. Chatfield, II, are still at Washington as Lieutenants, j. g., United States Naval Reserve Force. Both are aeronautical engineers in the aviation section of the Bureau of Construction and Repair. We understand that Chat developed such a fondness for the water while using up those tickets on the swan boats in the Boston Public Gardens that he cannot bear to leave the navy. Still the navy is not as wet as it used to be. MacCart, writes "Chatfield is a different man from what he was in his college days. Take my word, for I live with him and try to keep him on the straight and narrow path." We take it that Chat must be looking at some of the Washington yeomanettes out of the corner of his eye. Your secretary uses blinders when in the capital city.

Charlie Fiske, II, came back strong with his questionnaire. We know that we can rely on him to send in a few notes from time to time. We wish that some of the rest of the class would do the same thing. Charlie is manager of the Chicago district for the Federal Liquidating Association, Inc. of Washington, D. C. His office is in the Harris Trust Building, Chicago. Best of luck to you, Charlie, in your new enterprise. To those who are thinking that they are holding records we would remind the class that Charles Parker Fiske, Jr., has already passed his second birthday.

H. D. Swift, II, notifies us that, since he graduated with 1915, he has paid dues and affiliated himself with that class. Swift is with the National Conduit and Cable Co., at Hastings-on-Hudson, New York.

E. M. Fisk, II, is an engineering assistant with the Western Union Telegraph Co., in New York City. 1914 seems to be strong on the telephone and telegraph game.

Bill Price, X, alias William Henry, sends greetings from Akron, Ohio, where he is a chemist and engineer for the Goodyear Tire and Rubber Co.

R. F. Zecha, VI, has received his discharge from the navy, but has gone to work again for the government as submarine engineer for the Navy Department. He is stationed at Fore River, Quincy, Mass. The members of the class who attended the reunion had the pleasure of meeting his bride; the rest of the class, and Course VI in particular, will be pleased to know that Zec was married this spring. Good luck to you, Zecha. Perhaps some of the rest of the class will wake up now.

C. W. Ricker, VI, is still at Massachusetts Institute of Technology. He is an instructor in electrical engineering and is the big noise in the electrical engineering laboratory. We understand that he has been unable to find any one to replace Mr. Perry in the red ink contest. How tame the "lab" must be with no Perry or Terwilliger to correct reports! Good Old Days! (?)

A. R. Stubbs, XI, is with the First National Bank of Boston, but has been temporarily loaned to Tech to aid in the Endowment Fund Campaign. Art gave a very interesting talk to the members of the Alumni Council at a special meeting on September 29. He has also made trips to various centers where Massachusetts Institute of Technology men are located and has obtained, as well as given, some very interesting facts in regard to the campaign. With such an active man as Stubbs on this campaign fund committee every Fourteen man will feel sure that the fund will certainly be raised. The fact that Fourteen has been honored with one of its members in such an important position on the fund campaign committee has another meaning for the class. It means that every Fourteen man must back Stubbs to the limit. Not only is it expected that we will all do our parts but we must make this fact a matter of record early in the campaign so that the efforts of the committee can be devoted to other channels.

Ralph D. Salisbury, IV, announces that he is the proud father of a nine and one-eighth pound daughter, born on September 13. Congratulations! Salisbury is with Albert Kahn, architect, in Detroit, Mich.

H. A. Affel, VI, was three days ahead of Salisbury. He announced the birth of a son, Herman Andrew, Jr., on September 10. Congratulations also! Affel is an engineer in the Development and Research Department of the American Telephone and Telegraph Co., in New York City.

Think this over! Although a return stamp was enclosed, only about fifty per cent of the class have replied to their questionnaires. In the first month after the blanks were sent out less than twenty-five per cent of the 1914 men had replied to the Technology War Record Committee. Considerably over fifty per cent of the class fail to subscribe for the REVIEW. Are you one of those persons who take great delight in informing others that you are a Massachusetts Institute of Technology man and then within the walls of your own quiet home nonchalantly throw the Massachusetts Institute of Technology questionnaires and REVIEW bills into the wastebasket? Let us get together now and show some action. The past has gone, we are face to face with an active future. Let us start fresh again by replying today to the questionnaires which we still have unanswered and then when we receive our bills for the REVIEW for 1920 let us pay them promptly. If we are to succeed we must maintain our liaison.

NEW ADDRESSES

The following list represents those men who had replied to their questionnaires up to October 5, and had signified their desire to keep in touch with 1914 affairs:

P. H. Adams, 125 Hope Street, Providence, R. I.; H. A. Affel, VI, 54 Downing Street, Brooklyn, N. Y.; H. R. Aldrich, III, Wisconsin Geological Survey, Science Hall, Madison, Wis.; F. C. Atwood, XIV, 110 Brookline Avenue, Boston Mass.

L. S. Baird, II, 288 West Third Street, St. Paul, Minn.; H. J. Baker, VI, The Edison Electric Illuminating Co. of Boston, 39 Boylston Street, Boston, Mass.; H. W. Barker, IV, 329 Bewick Avenue, Detroit, Mich.; R. D. Bates, XI, General Delivery, Nitro, West Va.; N. E. Baxter, II, Baldwin Locomotive Works, 500 North Broad Street, Philadelphia, Pa.; G. H. Beard, I, 3337 Stevens Avenue, Minneapolis, Minn.; Joseph Beaudette, VI, 130 Federal Street, Boston, Mass.; P. F. Benedict, I, 491 Belmont Street, Belmont, Mass.; H. T. Bent, XIII, office of Assistant Superintendent of Hull Construction, Newport News Shipbuilding and Dry Dock Co., Newport News, Va.; C. M. Berry, VI, Room 510, 31 Milk Street, Boston, Mass.; A. C. Besosa, X, A. Besosa & Co., 205 West 80th Street, New York City; F. C. Blomquist, I, 25 Washington Street, South Charleston, West Va.; F. W. Bommer, X, Converse Rubber Shoe Co., Malden, Mass.; H. G. Borden, I, 383 East Merrimac Street, Lowell, Mass.; E. W. Bowler, XI, 22 Court Street, Dedham, Mass.; E. M. Boyd, II, 7 Westbourne Road, Newton Centre, Mass.; M. M. Braff, V, Apartment 24, 20 Prescott Street, Cambridge, Mass.; J. J. R. Bristow, X, Procter & Gamble, Kansas City, Kan.; W. C. Broga, XIV, 67 Hillcroft Avenue, Worcester, Mass.; H. F. Brown, I, 22 Franklin Street, Framingham, Mass.; L. W. Burnham, Captain United States Marine Corps, Marine Barracks, Navy Yard, Philadelphia, Pa.; C. H. Burns, X, 400 Fayette National Bank Building, Lexington, Ky.

C. J. Callahan, XI, Ballanger & Perrot, Ballston Spa, New York; Ross Campbell, X, 171 Cabot Street, Holyoke, Mass.; H. N. Calver, XI, 600 West 136th Street, New York City; F. A. Chandler, IV, 66 Glenville Avenue, Allston, Mass.; L. D. Charm, VI, 82 Wildwood Street, Mattapan, Mass.; C. H. Chatfield, II, 1823 Q Street, N. W., Washington, D. C.; T. L. Chase, I, 15 Peabody Street, Newton, Mass.; J. S. Churchill, X, Van Everen, Fish & Hildreth, 53 State Street, Boston, Mass.; F. C. Cleverly, XIII, United States Shipping Board, Houston, Texas; Harold Cohen, XIV, 66 Summit Street, Pawtucket, R. I.; A. E. G. Collins, III, 170 Colorado Boulevard, Denver, Col.; O. E. Conklin, VIII, The Du Pont Co., Porlin, N. J.; C. A. Corney, VI, 147 Milk Street, Boston, Mass.; J. A. Creighton, III, 420 Spruce Street, Steelton, Penn.; E. C. Crocker, XIV, 92 Swan Street, Everett, Mass.; C. F. Crommett, II, P. O. Box 193, Elizabeth, West Va.; D. G. Crowell, X, 28 Everett Avenue, Winchester, Mass.; R. J. Cunningham, I, 126 Park Place, Brooklyn, N. Y.; J. H. Currier, II, 204 Prince George Street, Annapolis, Md.; P. M. Currier, VI, Lighting Engineering Department, General Electric Co., Schenectady, N. Y.

H. J. Danforth, VI, 17 South New Hampshire Avenue, Atlantic City, N. J.; C. C. Davis, X, 146 Massachusetts Avenue, Boston, Mass.; C. P. Davis, X, 33 Arlington Street, Cambridge, Mass.; J. A. Deckop, V, 41 Goodrich Street, Buffalo, N. Y.; H. I. DeLamater, 141 South Syndicate Avenue, Fort William, Ontario, Canada; A. W. Devine, II, 20 Earl Street, Malden, Mass.; G. C. Derry, VI, B. F. Sturtevant Co., 52 Vanderbilt Avenue, New York City; R. H. Dickson, X, Technology Club of New York City, 17 Gramercy Park, New York, N. Y.; Thorn Dickson, I, Bismark, North Dakota; D. R. Dixon, XI, Claremont, N. H.; R. C. Doremus, II, 1st Lieutenant Ordance, Production Division, Artillery Section, Detroit

District, Ordnance Office, Ford Motor Co., Highland Park, Mich; A. C. Dorrance, X, Gorton-Pew Fisheries Co., Gloucester, Mass.; D. W. Douglas, II, W. E. Douglas, 214 Broadway, New York City; L. L. Downing, II, 30 Bowdoin Street, Cambridge, Mass.; L. B. Duff, I, 139 Lincoln Avenue, Bellevue, Penn.; F. E. Dunn, I, Tacajo Sugar Corporation, Tacajo, Oriente, Cuba.

J. W. Easter, VI, 618 Continental Building, Baltimore, Md.; W. N. Eichorn, XI, 93 Broad Street, Woodbury, N. J.; Albert Emerson, II, 1422 Lunt Avenue, Chicago, Ill.; R. M. Emerson, VI, 32 Uintah Apartments, Salt Lake City, Utah.

Dean A. Fales, II, 145 Highland Street, West Newton, Mass.; L. D. Faunce, IV, 437 West Jersey Street, Elizabeth, N. J.; R. J. Favorite, II, 40 Channing Street, New London, Conn.; H. V. Fay, IV, 72 Genesee Street, Auburn, N. Y.; J. P. Fish, VI, 6 Fuller Street, Brockton, Mass.; C. P. Fiske, II, 617 Harris Trust Building, Chicago, Ill.; E. M. Fisk, II, Room 1915, 195 Broadway, New York City; E. N. Frank, X, 3809 Portland Avenue, Minneapolis, Minn.; J. D. Froom, Fernwood Farm, North Billerica, Mass.; Constance Fuller, IV (Mrs. P. S. Howes), 243 High Street, Holyoke, Mass.

H. L. Gardner, I, 415 Belmont Avenue, Springfield, Mass.; H. T. Gazarian, II, 110 State Street, Boston, Mass.; J. E. W. Giffels, II, Federal Paper Board Co., Bogota, N. J.; F. P. Gilbert, XI, T. F. Bowe, Association Building, Rutherford, N. J.; S. M. Ginsburg, X, 1360 Ogden Avenue, New York City; R. C. Goeth, IV, The Walter Tips Co.; Austin, Texas; D. F. Gould, X, 4433 Paul Street, Frankford, Philadelphia, Penn.; A. F. Graham, 553 Walnut Street, Newtonville, Mass.; D. R. DesGranges, IV, 7 Newsome Park, Jamaica Plain, Mass.; L. J. Greenwood, Greenwood's Garage, Main Street, Walpole, Mass.; Maynard Griffith, IX, P. O. Box 76, Alameda, Calif.

J. A. Hadley, II, Worcester Gas Light Co., Worcester, Mass.; E. C. Hadley, VI, P. O. Box 752, Bridgeport, Conn.; A. J. Hahn, VI, 217 North Bellevue Boulevard, Mobile, Ala.; H. H. Hall, II, Aluminum Club, New Kensington, Penn.; L. S. Hall, II, 16 South Street, Concord, N. H.; O. C. Hall, VI, American Telephone and Telegraph Co., Providence, R. I.; L. F. Hamilton, V, 53 Randolph Street, Arlington, Mass.; A. S. Hammond, VI, Lake City, Hinsdale County, Colo.; G. W. Harding, II, United States Radiator Corporation, 301 Architects Building, Park Avenue, New York City; R. E. Hardy, I, 115 Chestnut Street, Andover, Mass.; H. L. Harlow, II, 59 Mt. Vernon Street, Malden, Mass.; W. G. Hauser, VI, 879 Watertown Avenue, Waterbury, Conn.; W. J. Hauser, IV, 5 Carson Street, Dorchester, Mass.; E. D. Hayward, I, The Koster Co., Soerabaya, Java, Netherlands, East India; A. N. Henricksen, II, 281 Princeton Street, East Boston, Mass.; J. W. Hines, VI, American Telephone and Telegraph Co., 195 Broadway, New York City; J. W. Horton, XIV, 105 South Grove Street, East Orange, N. J.; W. P. Houston, I, 7 Highland Avenue, Stoneham, Mass.; P. H. Hsu, V, 3437 Wilson Avenue, Cincinnati, Ohio; E. W. Huchins, I, 40 Crawford Street, Roxbury, Mass.; C. B. Hull, IV, 49 Sachem Street, Norwich, Conn.; F. L. Hurlbutt, II, Du Pont Building, Wilmington, Del.

James Isaacs, X, 14 Ivy Close, Forest Hills Gardens, Long Island, N. Y.

A. W. Johnson, II, 13 Linden Street, South Boston, Mass.; J. A. Judge, VI, Highland Manufacturing Co., 525 Main Street, Holyoke, Mass.

F. P. Karns, II, P. O. Box 533, Franklin, Pa.; H. M. Keating, X, Mittineague, Mass.; W. P. Keith, X, 1042 West Market Street, Akron, Ohio; Ernest Kerr, II, 805 Washington Street, Brookline, Mass.; H. C. Klipstein, X, 644 Greenwich Street, New York City.

H. M. Langdon, VI, 30 Brett Street, Brockton, Mass.; W. H. Leathers, II, Niles Bement, Pond Co., 111 Broadway, New York City; C. S. Lee, III, Box 97, Clarksdale, Ariz.; Malcolm Lewis, VII, 253 Madison Avenue, New York City; M. B. Lewis, VI, 7 Walnut Street, Westerly, R. I.; R. M. Linnell, XIV, 15 Bay State Road, Boston, Mass.; A. G. Long, I, American-La France Fire Engine Co., Elmira, N. Y.; I. H. Lovett, VI, 231 Park Avenue, Worcester, Mass.; W. E. Lucas, II, care of Mrs. D. A. Tomlinson, 910 Michigan Avenue, Evanston, Ill.

R. D. McCart, II (Lieut. j. g.), Bureau of Construction and Repair (Aviation) Navy Department, Washington, D. C.; Percy McCullough, VI, Weston, Mass.; D. R. McEnary, IV, 2324 Pleasant Avenue, South, Minneapolis, Minn.; W. R. McEwen, II, Wellsville, N. Y.; C. K. McFarlin, I, 170 Glenwood Avenue, East Orange, N. J.; R. A. McMenimen, X, Raymond Concrete Pile Co., 140 Cedar Street, New York City; W. L. McPherrin, II, Reynolds Wire Co., Dixon, Ill.; F. F. Mackentepe, V, Swenson Evaporating Co., 945 Monadnock Building, Chicago, Ill.; J. H. MacKinnon, IV, Liberty Shipbuilding Co., Wilmington, Del.; N. D. MacLeod, II, 290 Irving Avenue, Providence, R. I.; E. H. Magoon, care of Mr. D. A. Meeker, Atwood, Ill.; C. G. Maier, XIV, Phelps Dodge Corporation, 99 John Street, New York City; L. F. Marsh, II, 53 Pequossette Street, Watertown, Mass.; J. E. Marstolf, IV, 512 Third Avenue, New Brighton, Pa.; J. R. Masferrer, II, Guantanamo Sugar Co., Guantanamo, Cuba; M. S. Maxim, II, 118 North Street, Medford Hillside, Mass.; J. E. May, I, Yalesville, Conn.; H. A. Mayer, XIV, Mallory Hotel, Portland, Ore.; D. H. N. Mayo, II, 295 Seminole Street, Detroit, Mich.; F. D. Mendenhall, I, United States Forest Service, Denver, Col.; S. W. Merrill, 206 Summer Street, Newton Centre, Mass.; R. E. Merry, I, 41 Dover Street, West Somerville, Mass.; A. H. Miller, II, 36 Greenwood Avenue, Zanesville, Ohio; E. A. Mitchell, VI, 201 Warburton Avenue, Yonkers, N. Y.; R. W. Moorehouse, X, 950 Foulkrod Street, Frankford, Philadelphia, Pa.; P. E. Morrill, I, Bemis Bag Co., 601 South Fourth Street, St. Louis, Mo.; H. A. Morrison, II, 38 Crescent Street, Waterbury, Conn.; W. V. Murphey, VI, 255 East Main Street, New Britain, Conn.

E. M. Newlin, VI, 15 South Fifth Street, Minneapolis, Minn.

C. W. Olesn, II, 28 Symonds Street, Salem, Mass.

Israel Paris, XIV, United States Patent Office, Washington, D. C.; R. L. Parsell, II, 235 Park Street, New Haven, Conn.; Robert Parsons, VII, 55 Hanson Place, Brooklyn, N. Y.; E. L. O. Patten, II, 11 Holmes Street, Malden, Mass.; A. F. Peaslee, I, Box 28, Route 2, Las Ammas, Col.; R. W. Peatross, II, 1606 South Western Life Building, Dallas, Texas; G. K. Perley, VI, Holtzer-Cabot Electric Co., Roxbury, Mass.; R. H. Perry, II, 321 Prospect Street, Torrington, Conn.; A. F. Petts, II, 123 South Street, Fitchburg, Mass.; P. S. Platt, VII, 600 Webster Avenue, Scranton, Pa.; W. H. Price, X, 193 West Market Street, Akron, Ohio.

F. A. Ralton, I, 284 High Street, Lawrence, Mass.; B. T. Rauber, X, Henry L. Doherty & Co., 60 Wall Street, New York City; E. J. Reardon, 195 Erie Street, Cambridge, Mass.; J. B. Reber, II, 11 Jefferson Street, Auburn, N. Y.; L. M. Richardson, I, 17 Allston Heights, Allston, Mass.; H. B. Richmond, VI, 12 George Street, Medford, Mass.; C. W. Ricker, VI, 65 Newport Street, Arlington, Mass.; C. P. Ross, III, 1404 Fifteenth Street, N. W., Washington, D. C.; H. N. Ross, X, 735 Harrison Avenue, Beloit, Wis.; C. F. Ruoff, XIV, 321 West Main Street, Johnstown, N. Y.; H. R. Russell, 94 West Street, Ilion, N. Y.; P. A. Russell, I, 715 High Street, Dedham, Mass.

H. C. Sampson, I, P. O. Box 373, Mercedes, Texas; R. D. Salisbury, IV, 99 Fremont Place, Detroit, Mich.; M. J. Sayward, II, 279 Adelphi Street, Brooklyn, N. Y.; P. L. Scannell, XII, 174 Princeton Street, Lowell, Mass.; A. E. Schallenbach, II (see Albert Emerson); T. J. Schack, I, Public Works Department, Mare Island

Navy Yard, Cal.; G. C. Shedd, XIV, Keene, N. H.; A. P. Shepard, VI, 16 Trent Street, Arlington, Mass.; E. F. Shuster, 95 Avon Street, New Haven, Conn.; W. A. Simpson, X, 4922A Laclede Avenue, St. Louis, Mo.; C. L. Smith, VI, 107 Main Street, Niagara Falls, N. Y.; M. S. Smith, XIII, 16 Holten Street, Danvers, Mass.; P. R. Smith, II, 21 Montgomery Place, Brooklyn, N. Y.; L. W. Snow, I, Bond & Goodwin, 111 Broadway, New York City; W. A. Snow, II, Goodyear Tire and Rubber Co., Los Angeles, Cal.; E. E. Snyder, X, 31 Newtonville Avenue, Newton, Mass.; F. S. Somerby, I, The Donaldson School, Ilchester, Md.; S. J. Spitz, X, 1400 Grand Avenue, Milwaukee, Wis.; C. K. Springfield, I, 311 Slaughter Building, Dallas, Texas; S. W. Stanyan, VI, 66 Aqueduct Street, Akron, Ohio; E. I. Staples, VI, 38 Central Street, Wakefield, Mass.; A. T. Stearns, V, 59 Beaumont Street, Dorchester Centre, Mass.; H. L. Stone, I, 2814 Main Street, Stratford, Conn.; H. G. Storke, II, Perry, Parsons & Storke, 78 Devonshire Street, Boston, Mass.; O. E. Strahlmann, II, Bacon & Strahlmann, 1127 W. O. W. Building, Omaha, Neb.; A. R. Stubbs, XI, First National Bank, Boston, Mass.; D. J. Stump, II, International Engineering Works, Framingham, Mass.; D. L. Sutherland, II, 1819 South DuPont Avenue, Minneapolis, Minn.; A. V. Swift, I, 112 Winthrop Road, Brookline, Mass.

V. M. F. Tallman, VI, Worcester Electric Light Co., 11 Foster Street, Worcester, Mass.; P. H. Taylor, II, Bird & Son, Inc., East Walpole, Mass.; S. H. Taylor, IV, Adrian, Mich.; C. F. Thompson, III, Phelps Dodge Corporation, Tyrone, New Mexico; W. G. Tirrell, I, South Chatham, Mass.; R. V. Townsend, X, 2118 South State Street, Syracuse, N. Y.; L. L. Travis, VI, The Barber Asphalt Paving Co.; Land Title Building, Philadelphia, Pa.; H. W. Treat, II, Stroud & Co., Omaha, Neb.; A. S. True, II, 54 Lake Street, Arlington, Mass.; R. A. Trufant, I, P. O. Box 393, Mercedes, Texas; E. O. Turner, I, Harvard, Mass.; J. H. H. Turner, II, 42 Maple Street, Auburndale, Mass.; R. H. Tutle, II, Scovell, Wellington Co., 110 State Street, Boston, Mass.

F. J. Van Etten, I, 153 Milk Street, Boston, Mass.

A. H. Waitt, V, 27 Oakland Street, Medford, Mass.; C. J. Walton, VI, 116 Haddon Avenue, Collingswood, N. J.; L. F. Walsh, I, 5 Woodville Street, Roxbury, Mass.; Harold Warren, II, 11 Outlook Road, Swampscott, Mass.; W. H. Warren, II, 1st Lieut. United States Army, Governors Island, New York City; B. H. Waterbury, II, 45 Eleventh Street, Franklin, Pa.; L. K. Webber, II, 2 Lincoln Place, Decatur, Ill.; R. E. Wells, III, American Smelting and Refining Co., Murray, Utah; E. C. Wente, VI, Western Electric Co., 463 West Street, New York City; R. H. Wheeler, Derby & Robinson, 20 Beacon Street, Boston, Mass.; Francis Whitten, IV, 40 Central Street, Boston, Mass.; F. F. Wiggin, Chelmsford, Mass.; C. H. Wilkins, II, 62 Page Road, Newtonville, Mass.; H. S. Wilkins, XIV, 93 Central Street, Somerville, Mass.; F. W. Williams, XI, 1155 Hancock, Street, Quincy, Mass.; H. S. Willis, V, 26 Stearns Avenue, Lawrence, Mass.; J. E. Wood, IV, Elizabeth City, N. C.; Roland Woodward, II, 1314 West Tenth Street, Wilmington, Del.; H. M. Wylde, X, 1298 Commonwealth Avenue, Allston, Mass.

R. F. Zecha, VI, 60 Davis Street, Wollaston, Mass.

Fill out and send in YOUR blank for the Technology War Record Book.

1915

William B. Spencer, Secretary, 527 North Grove Street, East Orange, N. J.
Francis P. Scully, Assistant Secretary, 5 Exeter Park, Cambridge, Mass.

Every Man's Job — Work for the Technology Educational Fund.

Are you making your plans to attend the five year reunion, next spring?
Have you returned your War Record Questionnaire? Do it now.

"Dig in deep," help make the Alumni Endowment Fund a success—$4,000,000 by January 1.

Now let's all listen to the gossip. A little blue envelope, not a bluebird, arrived the other day saying, "Announcing the arrival of Meralyn Breck Dalton on August 28, 1919. Mr. and Mrs. M. B. Dalton." Congratulations, "Jack" and Mrs. Dalton, best wishes from 1915.

Mr. and Mrs. E. H. Stone of Winchester, Mass., announced the marriage of their daughter Charlotte to "Pop" Wood on Tuesday evening, September 16, 1919, in Winchester, Mass.—Alfred Nye also has been giving the parson a little business aside from preaching. Mr. and Mrs. W. F. Douglas of Acushnet, Mass., announce the marriage of their daughter Irene to "Alfie" on the 15th of September, 1919. We extend the best wishes of 1915 to the newlyweds and may they have much happiness in benedictive life. We would propose a toast to their health, but what's the use when all we could get would be soda or spring water?

"Jim" Tobey has left the quiet, restful town of East Orange, N. J., and has gone to that terrible city of Washington, D. C., as assistant to Dr. Livingston Farrand, director of the American Red Cross. His work is in connection with the development of the public health program of the Red Cross. We hope that Jim does not get mixed up in any race riots, or Senatorial fights, or League of Nations, or anything.

We wrote to Parry Kellar to inform us who were out in Akron, Ohio, nowadays. He writes:

> At the time there are five 1915 fellows with the Goodyear Tire and Rubber Co. In the main plant in Akron there are H. E. Morse, II, F. L. Cook, II, Norris Kimball, II, and H. D. Wheeler, II, is at the Toronto plant in Canada. Morse and Kimball are connected with the Mechanical Goods Department, while Cook and myself are in the auto and truck tire end of the game.
>
> Morse and Kimball have been with the company since graduation, while Fred Cook and myself are newcomers, coming directly on our discharge from the army.
>
> Cook has done a little track work since he has been in Akron, and I understand that he has performed very creditably, particularly in a meet in Gary, Ind. where the Goodyear representatives came through with first honors.

Here is a nice letter from Tisdale, postmarked "State Department of Health, Charleston, W. Va.":

> It has been some time since you have heard from the two sanitary engineers, Wardle and Tisdale. I believe that the big Cabin Creek Flood in West Virginia, shortly after we arrived, was the first big job we had in connection with flood sanitation.
>
> On September 1, 1919, due to the resignation of Mr. Tolman, '13, from the position of director and chief engineer for the Division, changes resulted within the department, Wardle being made chief engineer and I director of the department.
>
> The new public health law passed by the West Virginia legislature requires that all new water systems, purification plants, sewerage systems and disposal plants must have our approval before construction is started. At this time, therefore, when all municipal activities are speeding up, we are having our hands full to properly handle the work. Wardle is away on a three weeks' field trip at present.

A good many Tech men are coming into West Virginia these days and we manage to get a bunch together for a dinner about once a month at the Edgewood Country Club. I thought West Virginia was rather rough in spots with frequent holdups, moonshine joints, etc., but from all recent reports, Boston, with its police upheaval, has a little edge on even the hills and mountains here.

Best regards and I hope to get back to the "Hub" for the Reunion. Remember Wardle and myself to all '15ers.

Fill out and send in YOUR blank for the Technology War Record Book.

1916

James M. Evans, Secretary, 1916 16th Street, N. W., Washington, D. C.

Donald B. Webster, Assistant Secretary, 18 Clarendon Street, Malden, Mass.

Every Man's Job — Work for the Technology Educational Fund.

No report from the secretary.

E. L. Kaula, Class of 1916, is leaving San Francisco for Sydney, Australia, on November 11, next, representing the Texas Company. He is to be in charge of their railroad business in Australia and expects to remain in Australia for three years.

While at the Institute Kaula was a member of the Phi Beta Epsilon Fraternity and was author of Tech's show entitled "A Royal Johnny."

Donald B. Webster, 1916, who was track manager while at the Institute, expects to start on the 3d of November with the United States Rubber Export Company, Ltd., in New York City. Several other Tech men are connected with the same company, among them being "Ned" Huxley, '08, Ray Willis, '98, and Otto C. Lorenz, '18.

Mr. and Mrs. Eugene Lamb Richards of New Brighton, S. I., have announced the engagement of their daughter, Miss Diana Elmendorf Richards, to Eugene Willett Van Court Lucas, Jr., Course I, son of Colonel Lucas. Miss Richards is a graduate of Miss Spence's School and a member of the Junior League, also of the Amateur Comedy Club. Her father was formerly superintendent of banks.

Mr. Lucas was graduated from the Massachusetts Institute of Technology in 1916 and saw two years of active service in France. He is a member of the University Club and is now connected with the Pennsylvania Railroad.

Fill out and send in YOUR blank for the Technology War Record Book.

1917

Walter L. Medding, Secretary, 601st Regiment, Beaune, France.

A. E. Keating, Assistant Secretary, 893 Seaview Avenue, Bridgeport, Conn.

Every Man's Job — Work for the Technology Educational Fund.

No report from the Secretary. H. E. Lobdell, and Johnnie DeBell sent the following:

Now that hostilities are over, and every one is settling down, there is time for each 1917 man to tell Technology what he is doing. Don't wait for the next Review, but write at once to Art Keating, 893 Seaview Avenue, Bridgeport. He wants to hear from you and know where you are—just like everybody else in the class. And right here let us say that one week ago, 1917 led in the number of replies to the "dope" requests for Harry Tyler's War Record production with a total of two hundred and twenty-five, but 1918 is creeping up on us. Look out! Remember Field Day, 1914.

W. F. Johnson, 1st Lieutenant, 15th Infantry, was married on August 18 to Miss Frances Hyatt of West Hoboken, N. J. Johnson served in the Coast Artillery Corps, and later in the 13th Infantry, during the war. He has now been assigned to the 15th Infantry with station at Shanghai, and is en route with Mrs. Johnson to China, via Honolulu and the Philippines.

A. K. Althouse is in the coal business at Norristown, Pa.—Frank Conaty is married, but hasn't written us about it yet; likewise Tubby Strout.—Ed Tuttle is a "two-striper" in the Naval Air Service, and says he has spent most of the last three months in trying to get separated from the Service. He can be reached, care of Massachusetts Institute of Technology, Cambridge, Mass.—Last July, Claude Roberts, Captain Ordnance, was assistant G-4, American forces in Germany, at Coblenz, supervising and correlating the various munitions dumps along the Rhine. It is expected that he is organizing a real Tech Show to open soon in Berlin.—Ras Senter has organized an oil well drilling company, and is located at Wichita, Texas. —After serving with the First Engineers throughout the war, Tom Ryan is working with a contracting firm in New York, living at 35 W. 84th Street. Tom participated in the first raid staged by American troops, in the Toul sector, March, 1918.—Cy Medding, Captain Engineers, was married on July 15, shortly after his return from France, to Miss Elizabeth Steele Sherman, Radcliffe, 1917. The ceremony was performed at St. James Episcopal church, Roxbury. Cy is now stationed at Camp Gordon, Ga. He is requested to communicate with the assistant secretary.—Dick Lyons is with the Geological Department of the Sinclair Gulf Oil Co., Fort Worth, Texas.—The last seen of Gus Farnsworth, lieutenant, aviation, was in May, 1919, when he left the Technology Bureau in Paris, with two fair companions.

Clippings note the marriage of Al Hegenberger to Miss Louise Berchtold, on August 12, 1919, at Castle Island. The wedding was the first which has taken place at Fort Independence in a generation or more. Dear old Independence no more.—Dick Lowe is with the Winton Co., in Boston. He writes, "I joined up in the navy, finally got a commission, spent thirteen months at sea, part of the time with the British Grand Fleet, sunk a sub, and saw the Huns surrender; but was in no action, as there was none." And they ask, "Who did win the war?"—"Dud" Bell (Dudley E.) has resigned from the army to accept the second vice presidency of the Hohlfeld Manufacturing Co., Philadelphia, Pa., makers of hammocks, couch hammocks, and Turkish towels. He was prominent in the recent political fight in Bristol, Pa., and has contributed to the local press several articles on the high cost of living, which have excited very favorable editorial comment.—Lewis W. Douglas, 1st lieutenant, Field Artillery (91st division) was cited by General Pershing for "exceptionally meritorious and conspicuous service at Epinonville, France" (Meuse-Argonne offensive); and was decorated with the Belgian War Cross for gallantry at the battle of Audenarde. Douglas trained in the United States at the Presidio and at Camp Lewis. Ken Bell has been in Bridgeton, Maine, during the summer, assisting Colonel Billy Walker.—The Distinguished Service Cross went to Penn Brooks, for gallantry in action at Pont Maugis, France, on November 7, 1918. Penn was with the 1st Engineers throughout the war, and saw severe fighting, especially when the regiment was functioning as infantry. Among other actions, he was in the famous 1st Division attack which cleared the east bank of the Aire River (Meuse-Argonne Offensive) and permitted the " pinching out " of the Germans in the Argonne Forest proper. After the armistice, Penn was at the Sorbonne University in Paris. He is now Works Manager for the John Curtin Corporation of New York.

T. W. Burkhart and Gordon Shand are assistant naval constructors at the Norfolk, Va., Navy Yard.—Ted Bernard is purchasing agent for the Riverside Boiler Works, Cambridge. He is living at 1423 Commonwealth Avenue, Boston.—The engagement of Sidney S. Batchelder and Miss Chestina Josephine Redman, of Dedham, was announced early in September. Sid served eighteen months with the Royal Air Force and with American Aviation Forces.—C. E. Low was married on September 17, to Miss Edna May Rowell of Philadelphia, and will live at 4611 Spruce Street, Philadelphia. During the war, Low was a junior inspector in the navy, stationed at Camden, N. J.; he is now with the New York Shipbuilding Corporation, Philadelphia. —Mac McGrady is assistant superintendent of the Massasoit Manufacturig Co., Fall River, Mass. As a prominent member of the American Legion post there, he is continuing his former habit of leading parades in the Spindle City. It is said that he is keeping up his reputation as a committee promotor.—Dick McLaughlin is with the Goodyear Tire Co., his address is 628 E. Buchtel Avenue, Akron, Ohio.—Worthen Proctor is lieutenant, Ordnance Department, stationed at Bridgeport, Conn.—Bert Canby is with the duPont Company; he has just announced his engagement to the young lady whom he hopes to marry. Probably if he reads this, he will send us her name.—Alan Sullivan is in the research laboratory of the Carborundum Co., at Niagara Falls, N. Y.— Mr. and Mrs. E. J. Baker of Jamaica Plain have announced the engagement of their daughter, Bertha Elizabeth, to John R. Ramsbottom, Course VI. Ramsbottom was with the " heavies " seven months in France, and returned to the United States with the rank of major. He is connected with an electric light and power company in New York.—Leslie Hoffman and R. C. Sylvander are with the Bureau of Standards in Washington.

Paul Leonard has just returned to New York after touring the Berkshires in his car (Ford). He is now General Manager of the John Curtin Corporation, New York City. This accounts for current reports that the Tech Club is trembling with unknown righteousness.—Blondy Dowell writes " shipbuilding is just as good as ever, and the only work I have ever been interested in."—Dutch duPont is designing a factory for the Cadillac Motor Car Company, at Detroit, Mich. Dutch seems to have the class baby, but other claimants to this distinction are requested to submit pertinent data.—Bill Eddy is threatening " to enter the bond business." Look out for Federal agents and keep the stuff well hidden, William.—A. C. Carlton and W. A. Clark are still in the army; the former with the 3rd Infantry on the Border; and the latter with Company A, 3d Engineers, at Corregidor Island, Philippines.—Johnnie DeBell has resigned his commission in Field Artillery, announced his engagement, and entered the employ of the John Curtin Corporation, New York, all in one month. And she has a real ring this time!!!!—George Igleheart left the navy, and is now with the Ingersoll Rand Company, at Caston, Pa.—After serving with the 2d Division as 1st lieutenant, Field Artillery, throughout the war, Stan Dunning has left the service and is going into business with his father.—Art Keating is still at 893 Seaview Avenue, Bridgeport, Conn., (note the address) as assistant chief engineer of the Bridgeport Stamping Co.—We beg to announce, David E. Waite was married September 20, at Worcester, Mass., to Miss Marjorie Seward, and will reside at 21 Whitman Road, Worcester.—And also—Lookit!

" Miss Bertha D. Schlictling of Roxbury and William B. Collearey of Forest Hills were married at Forest Hills by Rev. William Casey."—Boston Advertiser.

Sergeant Walter A. Moore, who saw service with the 1st Division, and was cited for bravery at the battle of Cantigny, May 28, 1918, is now an asisstant military instructor at Boston University.—Captain Arthur R. Brooks, Distinguished Service Cross, and the only "Tech Ace," is still in the air service and is trying the breezes of Kelly Field at present. Ray has six official and four unofficial victories to his credit and perhaps he will not admit it, but we think he hopes to collar a few "Mexes" along the Border.——The Course IV twins are now separated: F. L. is doing government work in aerodynamic research at the Institute and W. B. is in Akron with the Firestone Tires. Both say "no more design for me." Yes, the last name in each case is "Ford."—Clark Robinson, IV, is an art director with the Famous Players Moving Picture Co.—Phil Cristal, I, captain Engineers, is now in France as a student officer.

News is received of the marriage of Miss Mildred Elizabeth Brock and Edward Hutchinson, Course IV. The bride is the only daughter of Mr. and Mrs. George E. Brock, and the groom is a son of Mr. and Mrs. Edward C. Hutchinson. He recently returned from duty overseas, where he served as a lieutenant in the United States army.

Mr. and Mrs. Hutchinson will spend their honeymoon touring the White Mountains. Late in October they will settle for the winter in Taunton.

Jimmie Wallis, Jr., XV, who as a captain, Coast Artillery Corps, attached to the Air Service, was awarded the Distinguished Service Cross, and also received a special citation from General Pershing, is now working as assistant sales engineer of the Sullivan Machinery Company, at Claremont, New Hampshire.—Jesse A. Rogers is back at the Institute taking Course II.—Fred A. Stearns, II, is now an instructor in a mechanical engineering laboratory.—Harry Seymour, II, is now a captain, Coast Artillery Corps, and according to the latest advices, is stationed in the Philippines.—Louis E. Wyman, XI, is now back as a senior at Tech. He was formerly a 1st lieutenant of Engineers, being seventeen months in France with the 1st Engineers of the 1st division.—H. W. Hamilton, VII, who was during the war a captain of the Sanitary Corps in France with the American Expeditionary Forces, is now located with the White Tar Company, Incorporated, of New Jersey, at 56 Vesey Street, New York City.—J. F. Dunbar, Jr., XV, is with J. Frank Dunbar Company, lumber brokers, New York City.—V. L. S. Hafner, IV, is with Nathan Myer, architect, R. 910 Woolworth Building, New York City.—"Ham" Wood is back in Boston doing some unknown work and is living at the Sigma Chi House.—D. G. Tarpley, IV, is with Carrere & Hastings, architects, New York City.—Frank Kline, IV, may be located at the Technology Club.—Word has been received of the death of Lieut. Reid H. Haslam, 104th Aero Squadron, who was killed on August 23, at San Antonio, Texas, when his plane crashed two hundred feet to the ground. The accident was particularly sad because, at the time, Haslam was expecting early discharge from the service and return to civil life. Haslam was born in Hyde Park in 1896. He prepared at the Hyde Park High School, and studied mechanical engineering at the Institute. He has been in the Aviation Service since November 5, 1918.

Capt. Joe Paul Gardner, IV, has been awarded the Croix de Guerre with palm.

Neal Tourtellote, Course XV, option 4, is said to be still leading the lazy life of a "wagon soldier" at the Presidio of San Francisco. Neal was formerly assistant to the inspector-general at Claremont and according to reports, discovered a Canadian nurse. How did she get in the American Army?

H. E. Lobdell, IV, is publicity manager of the Technology Educational Endowment Fund.

Fill out and send in YOUR blank for the Technology War Record Book.

1918

DAVID M. MCFARLAND, Secretary, 626 South High Street, West Chester, Pa.

Every Man's Job — Work for the Technology Educational Fund.

Kenyon Roper was killed in action September 14, 1918. For some time he had been reported missing in action. The death of Robert A. Mackay in action is also reported. Francis L. Long, II, died February 5, 1919, of influenza while employed at the Charlestown Navy Yard as ship draughtsman.

Mr. and Mrs. Herman Lemp announce the marriage of their daughter, Boudy, to Mr. John Blossom Woodward on Tuesday, September 9, 1918, Erie, Pa. Mr. and Mrs. Woodward will be at home after January 1, 322 Belmont Avenue, Newark, N. J. They were both members of Course IV at the Institute.

At the home of Mr. Oren C. Sanborn, Winchester, Mass., on June 25, 1919, Mrs. Jeaneatte M. Clapp was married to Franklin Van Zelm. Van Zelm was a member of Course IV and will be remembered as the cartoonist for several Technology publications.

At St. James Episcopal Church, North Cambridge, on September 16, 1919, Miss Ethel Eleanor Lacey was married to Lieut. Albert Haertlein, U. S. A., of St. Louis. Lieutenant Haertlein was recently discharged from the engineering corps and is an instructor of civil engineering at Harvard. They will reside in Cambridge.

Mr. Stanley K. Cooper, II, is now with the United States Conditioning and Testing Co. engaged in research work on textile materials.

J. W. Kennard and C. E. Tucker both of Course VI, are instructors in the Electrical Engineering Department.

Among the 1918 men who have returned to the Institute were noticed K. L. Ford, X, F. A. Travers, X, G. H. Porter, X, W. P. Ryan, X, O. G. Lufkin, XV, R. Sargent, II, E. Rogal, VI, G. R. White, XV, E. A. Mead, X, E. F. Rossman, II, C. E. Linscott, V, H. C. Stephens, III, W. H. Turner, III, H. M. Blank, XV, N. Dawson, XI, D. D. Warner, XV, J. C. Irwin, Jr., X, H. L. Wirt, XIII, and M. A. Loucks, II.

T. M. Knowland and H. C. Weber are at the Institute working for Dr. Lewis.

The following changes of address: Jacob Young, 65 Johnson Avenue, Winthrop, Mass.; Victor L. S. Haffner, 3 West 69th Street, New York, N. Y.; K. L. Hsueh, Alumni Association, Nanyang College, Shanghai, China; J. W. B. Kennard, 15 Folsom Street, Dorchester, Mass.; John R. Longley, 10510 S. Seeley Avenue, Chicago, Ill.; Edward A. Mead, 484 Beacon Street, Boston, Mass.; Takanaga Mitsui, 2 Suido-cho Koishikawa, Tokio, Japan.; En Chao Miao S. K. Yuen, 853 U. S. Postal Agency, Shanghai, China; Capt. M. M. Read, Fort Amador, Canal Zone.; J. E. Rowe, 326 Warburton Avenue, Yonkers, N. Y.

The engagement of Marguerite Waggett, daughter of Mr. and Mrs. Charles A. Waggett, Melrose Highlands, to Royal Barry Wills, son of Mrs. George A. Wills of Melrose is announced.

Miss Waggett was graduated from Miss Wheelock's Kindergarten Training School in 1916. Wills is a graduate of Technology, class of 1918. He is in business in Boston.

At the Institute Wills studied architectural engineering and was a member of Lambda Chi Alpha.

About fifty undergraduate members of the class of 1918, who left to enter the service during the war, and are at present completing their courses at the Institute, formed an organization today to be known as "The War Class of 1918." The following officers were elected: president, D. D. Warner, formerly a lieutenant in the Air Service and who won a Distinguished Service Cross for bravery in action; vice-president, J. W. Clarkson; secretary, D. M. Mcfarland; treasurer, W. P. Ryan.

Dean Burton spoke at the meeting, giving his approval of the organization. The class will take its place in Institute activities and as several former track men are among the number, it will probably be heard from in the spring.

At a meeting of the former members of the Class of 1918, who are present in the Institute this year, Donald Warner was elected president of this group of men. Warner was formerly a lieutenant in the Air Service and was awarded a Distinguished Service Cross for bravery in action.

Dean Alfred E. Burton welcomed the men back and said he thought it would be a great policy to keep up the class spirit and to keep such an organization of former 1918 men at the Institute.

Fill out and send in YOUR blank for the Technology War Record Book.

1919

E. R. Smoley, Secretary, Horse Head Inn, Palmerton, Pa.

Every Man's Job — Work for the Technology Educational Fund.

Only one hundred and thirty-six members of Class '19 have sent in their replies to the War Records Committee. Is the Class of 1919 in back of this committee?

The following newsy letter was received from Horace D. White, 110 Clinton Avenue, Oak Park, Ill.:

> I spent the first six months of this year with the Bethlehem Shipbuilding Corporation at Bethlehem, Pa., as a draftsman on warship hulls.
>
> I am now with the Sanitary District of Chicago, working on the design and building of sewage treatment plants and pumping stations.
>
> Roger Hall and R. S. Smith both of Course XI are here with me. We also see M. P. Smith, who is resident engineer on a road construction job at Geneva, Ill., for the state. Walt. Walworth, F. Horton, Harrey Stiller, L. A. Gillett are with the Illinois Highway Commission in various parts of the state. I left Fred Hewes at Bethlehem where he is doing estimating work for the Bethlehem Steel Bridge Co. E. Mirabelli was taking the McClintic Marshall Co's. structural course at Pittsburgh when I heard from him last. Henry Wilson is also taking a similar course given by the Bethlehem Bridge Co., at Steelton, Pa.

I should like to receive the addresses of the above mentioned members of the class and any news that would be of interest in these columns.

Paul Sheeline dropped a friendly line stating that he was at present back at the 'Stute.

Chester Stewart, X, writes in that he is about to sail for Stockholm, Sweden. The following from "The Tech" explains what Chester, out of modesty, did not have in his letter:

> Chester C. Stewart '19, Course X, is one of ten exchange students appointed by the American-Scandinavian Foundation to study in Sweden in exchange with ten Scandinavians who are to study in this country. Stewart, together with three others will study chemistry; two men will study each of the following subjects: Hydro-electric Engineering, Forestry and Metallurgy. The purpose of the foundation is to replace the former domination of German education and institutions of learning by an interchange of students with the United States.

Chester adds:

Al Richards X is still in Brooklyn and Bob Bolan is doing some graduate work at the University of Pennsylvania.

From the Boston "Traveler:"

Israel Maizlish, son of Mrs. Sophia Maizlish, 40 Blossom street, Lynn, has been appointed a professor at the University of Iowa, and left yesterday to assume his new duties.

Maizlish has resided in Lynn 10 years, coming to that city from Russia. He was educated in the public schools there, graduating from Lynn English High, class of 1915. He won the gold medal for being the smartest scholar in the school.

He graduated from Massachusetts Institute of Technology last June with the B. S. and M. S. degrees. At Iowa, in addition to his teaching, he will study for he Ph. D. degree. During the war he was enrolled in the students' army corps.

The Chronicle-Telegraph, Pittsburgh, Pa., says:

Canners in the Philippine Islands need machinery and are seeking the kind made in Pittsburgh. M. F. Lichauco, of Manila, arrived here yesterday for that purpose. He is at the William Penn Hotel and incidentally will study American methods of operation while he is in this country. He is a graduate of the Massachusetts Institute of Technology.

F. E. Chaflin received the following writeup in the Boston " Herald ":

The engagement has been announced of Miss Dorothy Birss Dempsey of Dorchester to Mr. Frederick Evarts Claflin of Marlboro and Boston. Miss Dempsey, who is the daughter of Mrs. Barbara Birss Dempsey, formerly of Chicago, and Mr. Claflin, who is the youngest son of Mr. and Mrs. Frederick L. Claflin of Marlboro, is a former Tech student and athlete and has but recently received his discharge from the army aviation corps.

Will the following kindly send their addresses: H. N. Shapero, P. M. Shaw, I. Lichter, V. B. Ching, W. J. Long, G. F. Beers, H. C. Wills, H. B. Blumberg, W. W. Boyer, T. M. Loyd, H. W. Best, A. F. O'Donnell, A. G. Richards, A. A. Cook?

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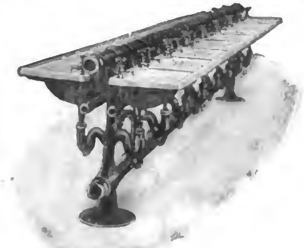

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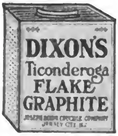

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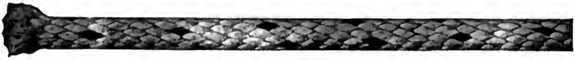

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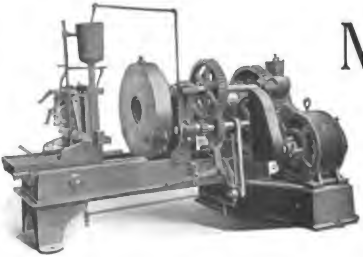

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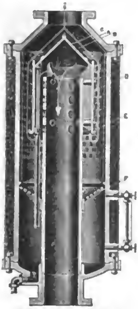

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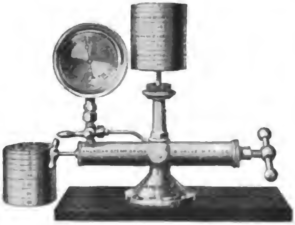

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THE ALUMNI

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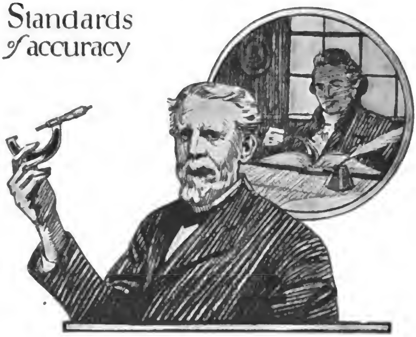

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are made according to the standard set by Noah Webster in 1828, when he defined accuracy—

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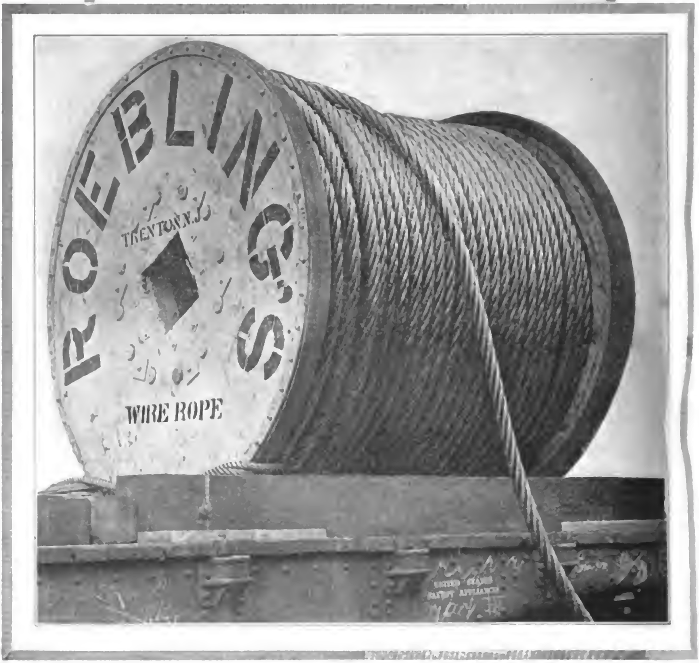

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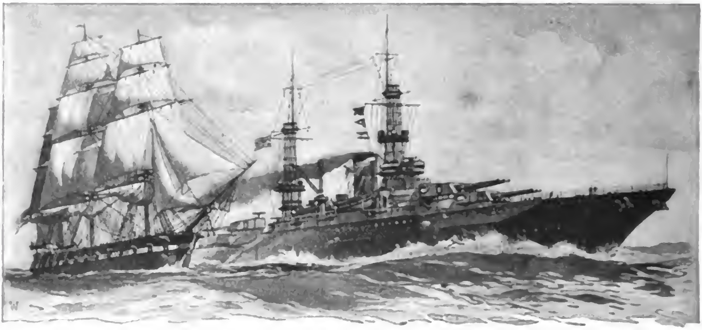

The "Constitution" of To-day—Electrically Propelled

THE U. S. S. "New Mexico," the first battleship of any nation to be electrically propelled, is one of the most important achievements of the scientific age. She not only develops the maximum power and, with electrical control, has greater flexibility of maneuver, which is a distinct naval advantage, but also gives greater economy. At 10 knots, her normal cruising speed, she will steam on less fuel than the best turbine-driven ship that preceded her.

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Displacement—32,000 tons
Fuel capacity—a million gallons (fuel oil)
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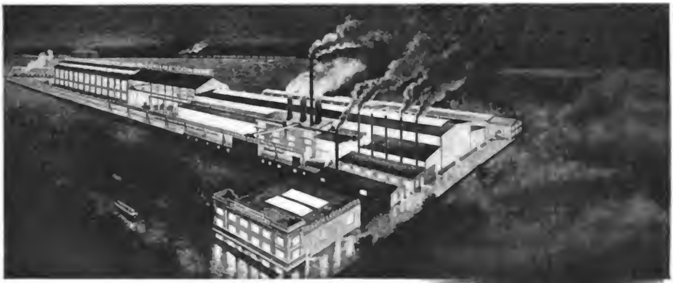

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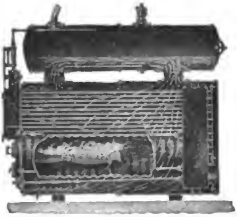

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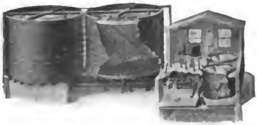
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Gravity Filters are built in units with capacities varying from 8,000 to 1,000,000 gallons per 24 hours each. Combinations for practically any capacity with required sedimentation can be furnished.

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That's all there is to that !

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If America is to hold its place, with rising labor costs, processes must be cheapened and waste eliminated by the kind of men the Institute turns out.

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Many lines of industry such as the Shoe and Leather, Textile, Wool, Paper, etc., realizing the necessity of insuring a source of supply of technical men, are interesting their members in helping Tech, purely as a business proposition.

❧

It is up to you to "sell" Technology to men of means to whom you have approach.

❧

Work with the committee in your district. Where there are a number of Tech men in a plant, form plant committees.

❧

Don't put off asking men of means to support Technology.

The Time is Short
DO IT NOW

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"The work (original construction) was done remarkably well on schedule time and your estimates were very close. Please install the additional capacity and make it a Stone & Webster station from start to finish."

This shows that satisfaction is best assured if we work *with you* rather than *for you*, and if we begin when your plans for a new plant or equipment are first taking shape.

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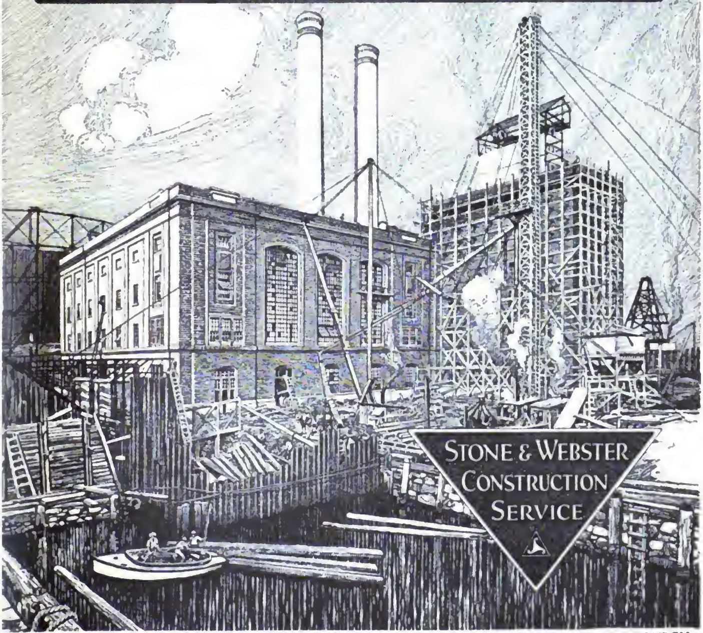

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We are bringing Mr. Gundelfinger's books to the attention of the readers of this particular periodical because we have not only been assured in advance that the "advertiser's message will be read," but have also been told that it will be read by "leaders in thought and action."

MR. GUNDELFINGER'S books *are not being read* by those "loyal" and popular Yale graduates who attend reunions regularly in order to indulge repeatedly in the degrading dissipations of their college days and who occasionally deposit a check in the Alumni Fund and then feel that they *have done their bit* for their Alma Mater.—But they *have been read* by several hundred "disloyal" alumni who *are doing their utmost* for the salvation, betterment and progress of Yale even though this involve the sacrifice of certain stagnant traditions which give the place that mellowness which precedes decay and in which the average graduate takes that pride which goeth before a fall.

For a college or a university may encourage among its graduates a "loyalty" which is just as showy and unrighteous as was the "patriotism" of the German Empire. But an Alma Mater, like a Fatherland, may also have given birth to some sons whose thoughts are in advance of those of their easy-going brothers—sons who foresee impending calamities—sons who have salutary dreams, but who lack the courage which would bring them to pass—sons who are unconsciously awaiting the shocks that will arouse them into doing and daring.

Mr. Gundelfinger's books were the shocks that aroused Yale. "The most sensational and amazing arraignment of Yale or any other university ever published." The fact that the *Yale Alumni Weekly* declined to advertise, review or even refer to these books did not intercept the transmission of these shocks to Yale's "leaders in thought" who, after reading them, were immediately transformed into "leaders in action." This trilogy has worked and is working regenerative revolutions at the university; they have been the stimulus behind and the prophecy before the Great Post-Bellum Reconstruction recently voted by the Yale Corporation.

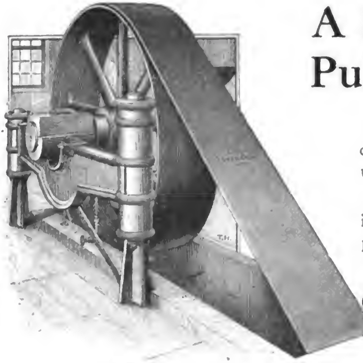
However, these books were not written for Yale men only; they were written because Mr. Gundelfinger went to college—not because he went to Yale. Despite the "distinguishing characteristics" claimed by various educational institutions, all colleges and universities are alike in that they have the same faults irrespective of their peculiar virtues. Mr. Gundelfinger has concentrated on DEFECTS in the modern academic world, and it is for this reason that his books should be and will be read by "leaders in thought" at ALL places of higher learning in America. There is, to be sure, nothing new about his subject-matter; it is his unique style which makes his books "conspicuous for their absence in the threadbare literature of education." Whether he uses the drama, the essay or the novel as medium he not only courageously opens the shutters on those deplorable conditions which all thinking alumni have observed and pondered over, but he *focuses the light* in such a way that it cannot fail to inflame *dormant* thinkers EVERYWHERE and impregnate them with the *activities* of reform and reconstruction.

Lack of space prevents us from reprinting here all the unsolicited endorsements, positive and negative, which have been received from college presidents, officers, professors, alumni, undergraduates, editors and book-reviewers all over the United States,— but we will gladly mail copies on request.

The New Fraternity

Literature and Music

Sewickley, Pennsylvania (Exclusive Publishers of Mr. Gundelfinger's Works)



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Two kinds of leather enter into a SparOak Belt. The outer ply is oak tanned, cut from the best selected center stock. The ply next the pulley is Graton & Knight Spartan leather, tanned to give pliability and traction power unequalled by any other material.

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Belting

The picture shows an 18 in. SparOak Belt driving a beater in a paper mill—hard duty in a warm, moist atmosphere. SparOak is the answer to a great many perplexing belt problems, saving power and standing up under the most severe conditions.

SparOak is one of the G & K Standardized Series Leather Belts — made according to the work to be done.

Write for booklet on Standardization as applied to Belting.

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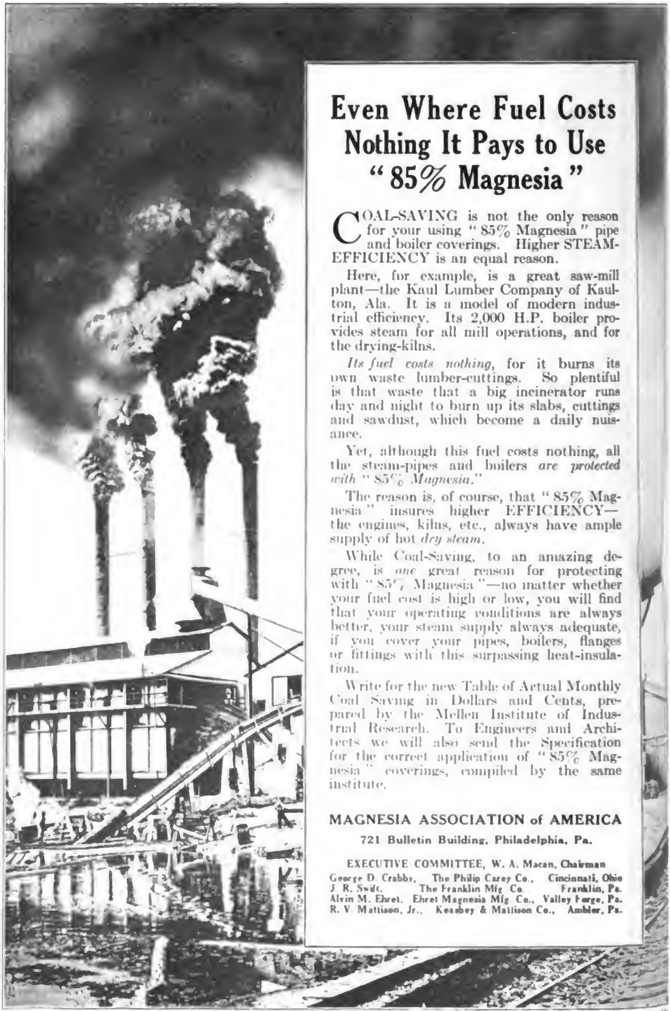

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Write for the new Table of Actual Monthly Coal Saving in Dollars and Cents, prepared by the Mellen Institute of Industrial Research. To Engineers and Architects we will also send the Specification for the correct application of "85% Magnesia" coverings, compiled by the same institute.

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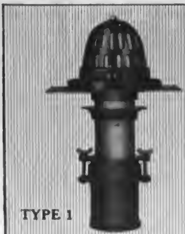

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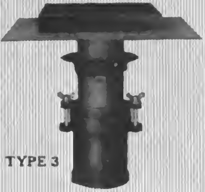

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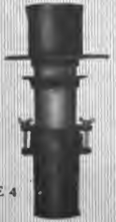

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In fact, buildings having interior roof drainage ar *incomplete* without Holt Roof Connections.

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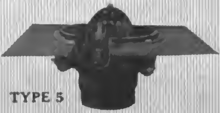

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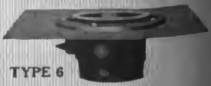

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